*This prospectus supplement, together with the short form base shelf prospectus dated August 18, 2015 to which it relates, as amended or supplemented, and each document incorporated by reference into this prospectus supplement or the short form base shelf prospectus, constitutes a public offering of these securities only in those jurisdictions where they may be lawfully offered for sale and therein only by persons permitted to sell such securities.*

***No securities regulatory authority has expressed an opinion about these securities and it is an offence to claim otherwise.*** *The securities to be offered hereunder have not been, and will not be, registered under the United States Securities Act of 1933, as amended (the "U.S. Securities Act") or the securities laws of any state of the United States. Accordingly, these securities may not be offered or sold within the "United States" or to or for the account or benefit of "U.S. Person", as such terms are defined in Regulation S under the U.S. Securities Act, except pursuant to transactions exempt from registration under the U.S. Securities Act and under applicable state securities laws. This prospectus supplement, together with the short form base shelf prospectus dated August 18, 2015 to which it relates, does not constitute an offer to sell or a solicitation of an offer to buy any of these securities within the United States or its territories or possessions.*

***Information has been incorporated by reference in this prospectus supplement and the short form base shelf prospectus to which it relates from documents filed with the securities commissions or similar authorities in the Canadian provinces of British Columbia, Alberta and Ontario.*** *Copies of the documents incorporated herein by reference may be obtained on request without charge from the Chief Financial Officer of Titan Medical Inc. at Suite 1000, 170 University Avenue, Toronto, Ontario, M5H 3B3, Telephone: (416) 548-7522 and are also available electronically at www.sedar.com.*

# PROSPECTUS SUPPLEMENT
## To the Short Form Base Shelf Prospectus dated August 18, 2015

*New Issue* February 9, 2016




**Minimum: CDN $9,999,999.90 (11,111,111 Units)**

**Maximum: CDN $10,999,999.80 (12,222,222 Units)**

---

**Price: CDN $0.90 per Unit**

---

Titan Medical Inc. (the "Company" or "Titan" or "we" or "our") is hereby qualifying for distribution a minimum of 11,111,111 units of the Company (the "Units") and a maximum of 12,222,222 Units, at a price of CDN $0.90 per Unit (the "Offering Price"). Each Unit consists of one common share of the Company (an "Offered Share") and one common share purchase warrant (a "Warrant") of the Company. Each whole Warrant will entitle the holder thereof to purchase one common share of the Company (a "Warrant Share") at an exercise price of CDN $1.00 per Warrant Share, subject to adjustment, at any time until 5:00 p.m. (Toronto time) on the date that is 60 months after the closing of the Offering (as defined below). The Units will immediately separate into Offered Shares and Warrants upon issuance. The distribution of the Units and the Broker Warrants (as defined herein) qualified by this prospectus supplement is referred to herein as the "Offering". See "Description of Offered Securities".

The outstanding common shares of Titan are listed and posted for trading on the Toronto Stock Exchange (the "TSX") under the symbol "TMD" and on the international tier of the OTCQX market in the United States under the symbol "TITXF". On February 8, 2016, the last trading day prior to the date of this prospectus supplement, the closing price of the common shares on the TSX was CDN $0.77 and on February 3, 2016, the last trading day prior to the announcement of the Offering, the closing price of the common shares on the TSX was CDN $1.45. The TSX has conditionally approved the listing of the Offered Shares, the Warrant Shares, the Over-Allotment Shares (as defined herein), the Over-Allotment Warrant Shares (as defined herein), the Broker Unit Shares (as defined herein) and the Broker Unit Warrant Shares (as defined herein) distributed under this prospectus supplement. In addition, the TSX has conditionally approved the listing of the Warrants under the symbol TMD.WT.G. Listing will be subject to the Company fulfilling the listing requirements of the TSX including, in the case of the Warrants, distribution to a minimum number of public securityholders, on or before May 5, 2016. **In the event that the TSX listing requirements for the Warrants are not satisfied, there will be no market through which the Warrants**

**may be sold and purchasers may not be able to resell the Warrants purchased in the Offering. This may affect the pricing of the Warrants in the secondary market, the transparency and availability of trading prices, the liquidity of the Warrants, and the extent of issuer regulation. See "Risk Factors".**

The Offering Price was determined by negotiation between the Company and Bloom Burton & Co. Limited (the "Agent"). The Units will be issued and sold in the Provinces of British Columbia, Alberta and Ontario pursuant to the terms of an agency agreement (the "Agency Agreement") dated as of February 9, 2016 between the Company and the Agent. The Units may also be offered for sale in the United States, by or through a United States registered broker-dealer appointed by the Agent as sub-agent (the "US Agent"), under certain exemptions from the registration requirements of the U.S. Securities Act and the applicable state laws. See "Plan of Distribution".

**An investment in the securities offered hereunder is speculative and involves a high degree of risk. The risk factors identified in this prospectus supplement, the short form base shelf prospectus dated August 18, 2015 to which this prospectus supplement relates and the documents incorporated by reference herein and therein should be carefully reviewed and evaluated by prospective investors before purchasing the securities being offered hereunder. See "Risk Factors" in this prospectus supplement, the short form base shelf prospectus dated August 18, 2015 to which this prospectus supplement relates and the documents incorporated by reference herein and therein.**

| | **Price: CDN $0.90 per Unit** | | |
|---|---|---|---|
| | **Price to the Public** | **Agent's Commission[(1)]** | **Net Proceeds to the Company[(2)]** |
| Per Unit[(3)]…….....……. | CDN $0.90 | CDN $0.063 | CDN $0.837 |
| Minimum Offering[(4)]...…….. | CDN $9,999,999.90 | CDN $699,999.99 | CDN $9,299,999.91 |
| Maximum Offering[(4)]…….... | CDN $10,999,999.80 | CDN $769,999.99 | CDN $10,229,999.81 |

**Notes:**

(1) The Company has agreed to pay the Agent a commission (the "Agent's Commission") of 7.0% of the aggregate gross proceeds of the Offering (or CDN $0.063 per Unit) sold by the Agent, including any proceeds raised through the sale of Units pursuant to the exercise of the Over-Allotment Option (as defined herein) but excluding the gross proceeds raised through the sale of Units to certain institutional purchasers of Units in the United States as identified in the side letter among the Agent and the Company dated February 2, 2016 (the "Excluded U.S. Subscribers") and subscribers identified by the Company on a list provided to the Agent (the "President's List Subscribers"). In addition to the Agent's Commission, the Company will issue to the Agent compensation warrants ("Broker Warrants") to purchase such number of Units as is equal to 7.0% of the aggregate number of Units and Over-Allotment Units (as defined herein) (but excluding those Units issued to Excluded U.S. Subscribers and President's List Subscribers) issued pursuant to the Offering. Each Broker Warrant shall entitle the Agent to acquire one Unit of the Company (each, a "Broker Unit") at the Offering Price for a period of 24 months following the Closing Date (as defined herein). Each Broker Unit consists of one common share (a "Broker Unit Share") and one common share purchase warrant (a "Broker Unit Warrant"). Each whole Broker Unit Warrant entitles the Agent to acquire one common share of the Company (a "Broker Unit Warrant Share") at an exercise price of $1.00 per Broker Unit Warrant Share, subject to adjustment, at any time until 5:00 p.m. (Toronto time) on the date that is 60 months after the closing of the Offering. See "Plan of Distribution". This prospectus supplement also qualifies the distribution of the Broker Warrants.

(2) After deducting the Agent's Commission, but before deducting expenses of the Offering (including listing fees) estimated to be approximately CDN $440,000, which will be paid from the proceeds of the Offering.

(3) From the price per Unit, the Company will allocate CDN $0.65 to each Offered Share and CDN $0.25 to each Warrant comprising the Units.

(4) The Company has granted the Agent an option (the "Over-Allotment Option"), exercisable in whole or in part at any time and from time to time on the Closing Date or for a period of 30 days following the Closing Date, to offer for sale such number of additional Units and/or Warrants as is equal to 15% of the number of Units issued under the Offering (the "Over-Allotment Units"), solely to cover over-allotments, if any, and for market stabilization purposes. The Over-Allotment Option may be exercised by the Agent in respect of (i) Over-Allotment Units at the Offering Price; (ii) additional Warrants (the "Over-Allotment Warrants") at a price of CDN $0.25 per Over-Allotment Warrant; or (iii) any combination of Over-Allotment Units and/or Over-Allotment Warrants, so long as the aggregate number of Over-Allotment Units and Over-Allotment Warrants does not exceed 15% of the number of Units issued under the Offering (excluding the Over-Allotment Option). Unless the context otherwise requires, references to the Units herein shall include the Over-Allotment Units and references to Warrants shall include the Over-Allotment Warrants. The common shares issuable upon exercise of the Over-Allotment Units are referred to herein as the "Over-Allotment Shares" and the common shares issuable upon exercise of the Over-Allotment Warrants (including Warrants issuable as part of the Over-Allotment Units) are referred to herein as the "Over-Allotment Warrant Shares". If the Agent exercises the Over-Allotment Option in full under the Maximum Offering for Over-Allotment Units, the total price to the public will be CDN $12,649,999.77; the aggregate Agent's Commission will be CDN $885,499.98; and the net proceeds to the Company, before deducting the estimated expenses of the Offering, will be CDN $11,764,499.79. This prospectus supplement qualifies the grant of the Over-Allotment Option and the distribution of the Over-Allotment Units and/or Over-Allotment Warrants. A purchaser who acquires securities forming part of the Agent's over-allocation position acquires those securities under this prospectus supplement, regardless of whether such over-allocation position is ultimately filled through the exercise of the Over-Allotment Option or through secondary market purchases. See "Plan of Distribution".

The following table sets out the number of options and other compensation securities that have been issued or may be issued by the Company to the Agent:

| Agent's Position | Minimum Offering | Maximum Offering | Exercise Period | Exercise Price |
|---|---|---|---|---|
| Over-Allotment Option | Up to 1,666,667 Over-Allotment Units and/or Over-Allotment Warrants | Up to 1,833,333 Over-Allotment Units and/or Over-Allotment Warrants | On the Closing Date or up to 30 days following the Closing Date | CDN $0.90 per Over-Allotment Unit and CDN $0.25 per Over-Allotment Warrant |
| Broker Warrants | Up to 894,444 Broker Units[(1)] | Up to 983,889 Broker Units[(1)] | Up to 24 months following the Closing Date | CDN $0.90 per Broker Unit |

Note:

(1) Assuming the Over-Allotment Option is exercised in full.

Subscriptions for Units will be received by the Agent subject to rejection or allotment in whole or in part and the right is reserved to close the subscription books at any time without notice. Closing of the Offering is expected to occur on or about February 12, 2016 or such earlier or later date as the Company and the Agent may agree (the "Closing Date"). Global certificates or an instant deposit through the non-certificated inventory system representing the Offered Shares and Warrants comprising the Units will be issued and deposited with CDS Clearing and Depository Services Inc. ("CDS"). A subscriber who purchases Units will receive only a customer confirmation from the registered dealer who is a CDS participant from or through whom Units are purchased. CDS will record the CDS participants who hold the Offered Shares and Warrants on behalf of owners who have purchased or transferred Offered Shares or Warrants in accordance with the book entry only system of CDS. Physical certificates evidencing Offered Shares and Warrants will not be issued except in limited circumstance and unless a request for a certificate is made to the Company. Physical certificates evidencing the Offered Shares and Warrants will be distributed to purchasers in the United States who meet the definition of institutional "accredited investors" as defined in Rule 501(a)(1), (2), (3) or (7) (each a "U.S. Institutional Accredited Investor") of Regulation D under the U.S. Securities Act.

The Agent conditionally offers the Units pursuant to the securities legislation of the Provinces of British Columbia, Alberta and Ontario on a best efforts basis and, subject to prior sale, if, as and when issued by the Company and delivered and accepted by the Agent in accordance with the conditions contained in the Agency Agreement referred to under "Plan of Distribution" and subject to approval of certain legal matters on behalf of the Company by Borden Ladner Gervais LLP and on behalf of the Agent by Baker & McKenzie LLP.

The Offered Shares and Warrants comprising the Units, and the Warrant Shares issuable on the exercise of the Warrants have not been and will not be registered under the U.S. Securities Act or any securities or "blue sky" laws of any of the states of the United States, and may not be offered or sold, directly or indirectly, within the United States or to, or for the account or benefit of, U.S. persons except in accordance with an exemption from the registration requirements of the U.S. Securities Act and applicable state securities laws.

You should rely only on the information contained or incorporated by reference in this prospectus supplement, the accompanying short form base shelf prospectus dated August 18, 2015, and the documents incorporated by reference herein and therein. The Company and the Agent have not authorized anyone to provide purchasers with information different from that contained or incorporated by reference in this prospectus supplement, the accompanying short form base shelf prospectus August 18, 2015, and the documents incorporated by reference herein and therein. The Company is offering to sell, and seeking offers to buy, the Units only in jurisdictions where, and to persons to whom, offers and sales are lawfully permitted. The Company does not undertake to update information contained or incorporated by reference in this prospectus supplement, except as required by applicable securities laws.

John Hargrove, a director and the Chief Executive Officer and Chairman of the Company, and Dr. Bruce Wolff, a director of the Company, each reside outside of Canada and each of them has appointed the Company as his agent

for service of process. Purchasers are advised that it may not be possible for investors to enforce judgements obtained in Canada against any person or company that is incorporated, continued or otherwise organized under the laws of a foreign jurisdiction or resides outside of Canada, even if the party has appointed an agent for service of process.

**Prospective investors should be aware that the acquisition or disposition of the securities described herein may have tax consequences in Canada. This prospectus supplement may not describe these tax consequences fully. You should consult and rely on your own tax advisor with respect to your own particular circumstances. See "Certain Canadian Federal Income Tax Considerations".**

# TABLE OF CONTENTS

IMPORTANT NOTICE ABOUT THE INFORMATION IN THIS PROSPECTUS SUPPLEMENT ..... S-2
DEFINITIONS AND OTHER MATTERS ..... S-3
SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS ..... S-3
CURRENCY PRESENTATION AND EXCHANGE RATE INFORMATION ..... S-5
DOCUMENTS INCORPORATED BY REFERENCE ..... S-6
DESCRIPTION OF BUSINESS ..... S-7
RECENT DEVELOPMENTS ..... S-12
PRICE RANGE OF LISTED SECURITIES ..... S-13
PRIOR SALES ..... S-17
DESCRIPTION OF OFFERED SECURITIES ..... S-18
CAPITALIZATION ..... S-21
USE OF PROCEEDS ..... S-21
PLAN OF DISTRIBUTION ..... S-23
RISK FACTORS ..... S-25
ELIGIBILITY FOR INVESTMENT ..... S-27
CERTAIN CANADIAN FEDERAL INCOME TAX CONSIDERATIONS ..... S-27
TRANSFER AGENT AND REGISTRAR ..... S-30
EXPERTS ..... S-30
LEGAL MATTERS ..... S-30
PURCHASERS' STATUTORY RIGHTS AND CONTRACUAL RIGHTS OF WITHDRAWAL AND RESCISSION ..... S-30
CERTIFICATE OF THE COMPANY ..... C-1
CERTIFICATE OF THE AGENT ..... C-2

## IMPORTANT NOTICE ABOUT THE INFORMATION IN THIS PROSPECTUS SUPPLEMENT

### General Advisory

This document is comprised of two parts. The first part is this prospectus supplement, which describes the specific terms of the Offering and certain other matters and also adds to and updates information contained in the accompanying short form base shelf prospectus dated August 18, 2015, and the documents incorporated by reference herein and therein. The second part, the accompanying short form base shelf prospectus dated August 18, 2015, gives more general information about securities we may offer from time to time, some of which may not apply to the Offering.

You should rely only on the information contained in or incorporated by reference in this prospectus supplement and the accompanying short form base shelf prospectus dated August 18, 2015. To the extent that there is a conflict between the information contained in this prospectus supplement, on the one hand, and the accompanying short form base shelf prospectus dated August 18, 2015, on the other hand, you should rely on the information in this prospectus supplement. We have not and the Agent has not authorized anyone to provide you with different or additional information. We are not and the Agent is not making an offer of the Units in any jurisdiction where the offer is not permitted by law. If anyone provides you with any different or inconsistent information, you should not rely on it. You should not assume that the information contained in or incorporated by reference in this prospectus supplement or the accompanying short form base shelf prospectus dated August 18, 2015 is accurate as of any date other than the date on the front of this prospectus supplement with respect to information contained herein and, with respect to information incorporated by reference, the date of such document so incorporated. The Company's business, financial condition, results of operations and prospects may have changed since those dates.

### Market and Industry Data

Unless otherwise indicated, information contained in this prospectus supplement and the accompanying short form base shelf prospectus dated August 18, 2015 concerning our industry and the markets in which we operate or seek to operate, including our general expectations and market position, market opportunities and market share, is based on information from independent industry organizations and consultants, other third-party sources (including industry publications, surveys and forecasts), such as Grand View Research Inc. ("Grand View"), and management studies and estimates. The Grand View report described herein titled "Medical Robotic Systems by Product (Surgical, Orthopedic, Laparoscopy, Neurological, Rehabilitation, Assistive, Prosthetics, Orthotics, Steerable, Therapeutic, Exoskeleton, Non-Invasive, Hospital/Pharmacy, Telemedicine, I.V, Pharmacy, Emergency Response Robotic Systems) – Analysis and Segment Forecasts to 2022" (the "Grand View Report") contains subjective research opinions and viewpoints of Grand View. The Grand View Report speaks as of its original publication date, August 2015 (and not as of the date of this prospectus) and the opinions and market data expressed in the Grand View Report are subject to change without notice.

The Company believes that these sources are generally reliable, but the accuracy and completeness of this information is not guaranteed. We have not independently verified this information.

While we believe the market position, market opportunity and market share information included in this prospectus supplement and the accompanying short form base shelf prospectus dated August 18, 2015 is generally reliable, such information is inherently imprecise. In addition, projections, assumptions and estimates of our future performance and the future performance of the industry and markets in which we operate are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described under the heading "Forward-Looking Statements" and "Risk Factors".

### Trade-marks, Trade Names and Service Marks

This prospectus supplement and the accompanying short form base shelf prospectus dated August 18, 2015 includes references to our trade-marks, such as SPORT™ Surgical System and TITAN™, each of which is protected under applicable intellectual property laws of one or more countries and is our property. Solely for convenience, our trade-marks referred to in this prospectus supplement and the accompanying short form base shelf prospectus dated

August 18, 2015 may appear without the ™ symbol, but such references are not intended to indicate, in any way, our rights in such marks or that we will not assert, to the fullest extent under applicable law, our rights to these trade-marks and trade names. All other trade-marks and trade names references in this prospectus supplement or the accompanying short form base shelf prospectus dated August 18, 2015 are the property of their respective owners.

## DEFINITIONS AND OTHER MATTERS

In this prospectus supplement and in the accompanying short form base shelf prospectus dated August 18, 2015, unless otherwise indicated, references to "we", "us", "our", "Titan" or the "Company" are to Titan Medical Inc.

This prospectus supplement is deemed to be incorporated by reference into the accompanying short form base shelf prospectus dated August 18, 2015 solely for the purposes of the Offering. Other documents are also incorporated or deemed to be incorporated by reference into this prospectus supplement and into the accompanying short form base shelf prospectus dated August 18, 2015. See "Documents Incorporated by Reference" in this prospectus supplement.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the accompanying short form base shelf prospectus dated August 18, 2015 and the documents incorporated by reference herein and therein contain "forward-looking information", within the meaning of applicable Canadian securities laws, concerning anticipated developments and events which the Company has a reasonable basis to believe may occur in the future. These forward-looking statements are made as of the date of this prospectus supplement or, in the case of documents incorporated by reference herein, as of the date of such documents. Forward-looking statements are frequently, but not always, identified by words such as "expects", "expectation", "anticipates", "believes", "intends", "estimates", "predicts", "continues", "potential", "targeted", "plans", "possible" and similar expressions (including negative and grammatical variations), or statements that events, conditions or results "will", "may", "could", "would" or "should" occur or be achieved. Any forward-looking statements or statements of "belief", including the statements made under "Risk Factors", represent our estimates only as of the date of this prospectus supplement and the documents incorporated by reference herein, respectively, and should not be relied upon as representing our estimates as of any subsequent date. These forward-looking statements may concern anticipated developments in the Company's operations in future periods, the adequacy of the Company's financial resources and other events or conditions that may occur in the future, and include, without limitation, statements regarding:

- the Company's technology and research and development objectives, including development milestones, estimated costs and schedules for completion;
- the Company's intention with respect to updating any forward-looking statement after the date on which such statement is made or to reflect the occurrence of unanticipated events;
- the Company's expectation with respect to continuing animal feasibility and commencing cadaver studies;
- the Company's expectation with respect to the initiation of human clinical trials and initial regulatory submissions;
- the Company's expectation with respect to launching a commercial product in certain jurisdictions;
- the Company's plans to develop and commercialize the SPORT™ Surgical System and the estimated incremental costs (including cost and timing of achieving the development milestones disclosed herein);
- the Company's intentions with respect to initiating marketing activities following receipt of the applicable regulatory approvals;
- the surgical indications for, and the benefits of, the SPORT™ Surgical System;
- the Company's intention to continue to assess specialized skill and knowledge requirements and recruitment of qualified personnel and partners;
- the Company's belief that the materials and parts necessary for the manufacture of a clinical-grade SPORT™ Surgical System will be available in the marketplace;
- the Company's filing and prosecution of patent applications to expand its intellectual property portfolio as technologies are developed or refined;
- the Company's seeking of licensing opportunities to expand its intellectual property portfolio;
- the Company's intended use of proceeds of the Offering;

- the Company's intention with respect to not paying any cash dividends on common shares in the foreseeable future;
- the Company's intention to retain future earnings, if any, to finance expansion and growth;
- the potential market for warrants or units; and
- over-allotment options or other transactions which would stabilize or maintain the market price of the Company's securities.

Forward-looking statements are statements about the future and are inherently uncertain, and actual results of the Company or other future events or conditions may differ materially from those reflected in the forward-looking statements due to a variety of risks, uncertainties and other factors, including those referred to in this prospectus supplement and the accompanying short form base shelf prospectus dated August 18, 2015, including but not limited to those described in the section titled, "Risk Factors" herein and therein, in any document incorporated by reference herein or therein, or listed from time to time in our reports, public disclosure documents and other filings with the securities commissions in Canada. These risks include, but are not limited to:

- current global financial conditions;
- dependence on key personnel;
- conflicts of interest;
- the Company's ability to obtain additional financing;
- strategic alliances;
- uncertainty as to product development and commercialization milestones;
- results of operations;
- competition;
- rapidly changing markets;
- uncertain market or uncertain acceptance of the Company's technology;
- technological advancements;
- intellectual property protection and infringement;
- ability to license the intellectual property rights of others;
- insurance and uninsured risks;
- product and services not completely developed;
- government regulation;
- changes in government policy;
- regulatory approval;
- changes in accounting and tax rules;
- contingent liabilities;
- manufacturing risks;
- product defect risk;
- profitability;
- supplier risk;
- history of losses;
- stock price volatility;
- future share sales;
- limited operating history;
- fluctuating financial results; and
- currency fluctuations.

Forward-looking statements are based on a number of assumptions which may prove to be incorrect, including but not limited to assumptions about:

- general business and current global economic conditions;
- future success of current research and development activities;
- achieving development and commercial milestones;
- competition;

- changes to tax rates and benefits;
- the availability of financing;
- the Company's and competitors' costs of production and operations;
- the Company's ability to attract and retain skilled employees;
- the Company's ongoing relations with its third-party service providers;
- the design of the SPORT™ Surgical System and related platforms and equipment;
- the progress and timing of the development of the SPORT™ Surgical System;
- costs related to the development, completion and potential commercialization of the SPORT™ Surgical System;
- receipt of all applicable regulatory approvals;
- estimates and projections regarding the robotic surgery equipment industry;
- protection over the Company's intellectual property rights;
- market acceptance of the Company's systems under development; and
- the type of specialized skill and knowledge required to develop the SPORT™ Surgical System and the Company's access to such specialized skill and knowledge.

We caution that the foregoing list of important factors and assumptions is not exhaustive. Although the Company has attempted to identify on a reasonable basis important factors and assumptions related to forward-looking statements, there can be no assurance that forward-looking statements will prove to be accurate, as events or circumstances or other factors could cause actual results to differ materially from those estimated or projected and expressed in, or implied by, these forward-looking statements. Other than as specifically required by law, the Company undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made, or to reflect the occurrence of unanticipated events, whether as a result of new information, future events or results or otherwise. Accordingly, readers should not place undue reliance on forward-looking statements.

## CURRENCY PRESENTATION AND EXCHANGE RATE INFORMATION

All currency amounts in this prospectus supplement are expressed in United States dollars ("US $"), unless otherwise indicated. The following table sets out the noon exchange rate of US $1.00 in terms of Canadian dollars ("CDN $").

| | High (CDN) | Low (CDN) | Average (CDN) |
|---|---|---|---|
| Nine months ended | | | |
| September 30, 2015 | $1.3413 | $1.1728 | $1.2600 |
| September 30, 2014 | $1.1251 | $1.0614 | $1.0942 |
| Fiscal years ended | | | |
| December 31, 2015 | $1.3990 | $1.1728 | $1.2788 |
| December 31, 2014 | $1.1643 | $1.0614 | $1.1047 |

On February 8, 2016, the noon exchange rate for US $ in terms of CDN $, as quoted by the Bank of Canada, was US $1.00 = CDN $1.3921.

*Functional Currency*

Prior to January 1, 2014, the functional currency for Titan Medical Inc. was the Canadian dollar. As the Company continues to move closer to commercialization of the SPORT™ Surgical System, more of its transactions with suppliers, partners and employees are in US $. As the Company does not have operating revenue, the primary factor in determining functional currency relates to the currencies in which it incurs expenditures. Titan expects the level of spending in US $ to continue to increase in 2015 and beyond. As a result and in accordance with IAS 21, "The Effects of Changes in Foreign Exchange Rates", Titan has adopted the US $ as its functional currency, effective January 1, 2014.

## DOCUMENTS INCORPORATED BY REFERENCE

Information has been incorporated by reference in this prospectus supplement from documents filed with securities commissions or similar regulatory authorities in Canada. Copies of the documents incorporated by reference herein may be obtained on request without charge from the Chief Financial Officer of the Company at Suite 1000, 170 University Avenue, Toronto, Ontario, M5H 3B3, Telephone: (416) 548-7522. These documents are also available through the internet under the Company's profile on the System for Electronic Document Analysis and Retrieval which can be accessed at www.sedar.com. The following documents, filed with the various securities commissions or similar authorities in each of the provinces of British Columbia, Alberta and Ontario, are specifically incorporated by reference into and form an integral part of this prospectus supplement:

1. the annual information form of the Company dated March 31, 2015 for the year ended December 31, 2014 (the "AIF");

2. the audited financial statements of the Company as at, and for the financial years ended, December 31, 2014 and 2013, together with the notes thereto and together with the Independent Auditor's Report thereon;

3. management's discussion and analysis of financial condition and results of operations for the financial year ended December 31, 2014;

4. the unaudited condensed interim financial statements of the Company as at, and for the three and nine months ended September 30, 2015, consisting of the condensed interim balance sheet of the Company as at September 30, 2015 and the condensed interim statement of shareholders' equity and deficit, net and comprehensive loss and cash flows for the three and nine months ended September 30, 2015 and 2014, together with the notes thereto;

5. management's discussion and analysis of financial condition and results of operations for the three and nine months ended September 30, 2015;

6. the management information circular dated May 8, 2015 relating to Titan's annual and special meeting of shareholders held on June 9, 2015;

7. material change report of the Company dated November 4, 2015 in respect of having entered into a letter agreement with Longtai Medical Inc.;

8. material change report of the Company dated November 6, 2015 in respect of a previous offering;

9. material change report of the Company dated November 25, 2015 in respect of a private placement of common shares; and

10. material change report of the Company dated February 9, 2016 in respect of the Offering.

Material change reports (other than confidential reports), business acquisition reports, interim financial statements, annual financial statements and annual information forms and all other documents of the type required by National Instrument 44-101 – *Short Form Prospectus Distributions* to be incorporated by reference in a short form prospectus, filed by the Company with a securities commission or similar regulatory authority in Canada after the date of this prospectus supplement and before completion or withdrawal of this Offering, will be deemed to be incorporated by reference into this prospectus supplement.

Upon a new annual information form and annual financial statements being filed by the Company with the applicable Canadian securities commissions or similar regulatory authorities in Canada during the period that this prospectus supplement is effective, the previous annual information form, the previous annual financial statements and all interim financial statements, and in each case the accompanying management's discussion and analysis of financial condition and results of operations, and material change reports, filed prior to the commencement of the financial year of the Company in which the new annual information form is filed shall be deemed to no longer be

incorporated into the prospectus supplement for purposes of offers and sales of Units under this prospectus supplement. Upon interim financial statements and the accompanying management's discussion and analysis of financial condition and results of operations being filed by the Company with the applicable Canadian securities commissions or similar regulatory authorities during the period that this prospectus supplement is effective, all interim financial statements and the accompanying management's discussion and analysis of financial condition and results of operations filed prior to such new interim financial statements and management's discussion and analysis of financial condition and results of operations shall be deemed to no longer be incorporated into this prospectus supplement for purposes of offers and sales of Units under this prospectus supplement. In addition, upon a new management information circular for an annual meeting of shareholders being filed by the Company with the applicable Canadian securities commissions or similar regulatory authorities during the period that this prospectus supplement is effective, the previous management information circular filed in respect of the prior annual meeting of shareholders shall no longer be deemed to be incorporated into this prospectus supplement for offers and sales of Units under this prospectus supplement.

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus supplement shall be deemed to be modified or superseded for the purposes of this prospectus supplement to the extent that a statement contained in this prospectus supplement or in any subsequently filed document which also is or is deemed to be incorporated by reference in this prospectus supplement modifies or supersedes that statement. The modifying or superseding statement need not state that it has modified or superseded a prior statement or include any other information set forth in the document or statement that it modifies or supersedes. The making of a modifying or superseding statement shall not be deemed an admission for any purpose that the modified or superseded statement, when made, constituted a misrepresentation, an untrue statement of a material fact or an omission to state a material fact that is required to be stated or that is necessary to make a statement not misleading in light of the circumstances in which it was made. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement.

## DESCRIPTION OF BUSINESS

### Product Development

The Company's business is focused on computer-assisted robotic surgical technologies for application in minimally invasive surgery ("MIS") and is transitioning from research and development to a commercialization phase. The Company is currently developing the SPORT™ Surgical System, a single-port/single-incision robotic surgical system to provide tele-operation (remote surgery) capabilities. The SPORT™ Surgical System comprises a surgeon-controlled robotic platform (patient cart) that includes a 3D high definition vision system and multi-articulating instruments for performing MIS procedures, and a surgeon workstation that provides the surgeon with an advanced ergonomic interface to the robotic platform and also provides a 3D endoscopic view of inside a patient's body during MIS procedures. Development of the SPORT™ Surgical System has proceeded in response to "voice of customer" feedback and in consultation with medical technology development firms engaged by the Company and the Company's Surgeon Advisory Board (the "Surgeon Advisory Board") comprised of industry-leading surgeons. This approach has allowed the Company to develop a robotic surgical system that will not only include the traditional advantages of robotic surgery, including tele-operation, 3D stereoscopic imaging and restoration of natural control, but also new and enhanced features including a 3D high definition display to provide a more ergonomic-friendly user interface to the surgeon workstation and a robotic platform with improved instrument dexterity. The advanced ergonomic design of the workstation also includes two custom designed input controllers, a second display for delivering ancillary information to the surgeon and elbow supports instead of forearm supports to provide an overall more comfortable working position for the surgeon. Overall, the design of the surgical system is intended to allow for the system to adapt to the surgeon instead of having the surgeon adapt to the system. The SPORT™ Surgical System is also being developed to allow for data collection and analytics that could be utilized by the surgeon and/or operation room teams. With the SPORT™ Surgical System, the Company aims to pursue a broad set of surgical indications, including general abdominal, gynecologic and urologic and colo-rectal procedures.

The Company has completed research and early development of the major components of the SPORT™ Surgical System including multi-articulating instruments with multiple degrees of freedom of movement, a custom designed 3D high definition vision system capable of motorized pan and tilt, one-to-one movements and surgeon controls that allow the user to control the instruments through movements of the surgeon controllers.

In addition to development of robotic surgical technologies, the Company continues to explore in-licensing opportunities for technologies that may be used in conjunction with the Company's surgical system under development. In 2012, the Company entered into an agreement with The Trustees of Columbia University in the City of New York for an exclusive license to certain intellectual property rights relating to a robotic surgical technology for use in single-port surgery. The Company's exclusive license rights include the right to develop, use, manufacture, and sell products covered by the licensed intellectual property throughout the world for human surgical applications. This technology has formed the basis of the SPORT™ Surgical System.

The SPORT™ Surgical System robotic platform has been designed with the goal of providing multi-articulating instruments and a 3D high definition vision system for insertion into a patient's body cavity through a single incision. The design of the robotic platform includes an insertion tube of approximately 19mm in diameter that is capable of being inserted into the patient's body cavity through a skin incision of approximately 25mm. The insertion tube includes a collapsible portion incorporating the 3D high definition vision system inside a camera module equipped with a digital zoom at a distal end that once inserted, is configured to deploy into a working configuration wherein the 3D high definition vision system and multi-articulating instruments can be controlled by a surgeon at the workstation. The multi-articulating, interactive, snake-like instruments are designed to couple with removable and sterile single patient use robotic tools that would provide first use quality in every case and eliminate the reprocessing of the instrument. The use of reposable (re-usable for a specific number of uses) robotic instruments and single patient use tools allows more use cases for each robotic instrument thus reducing the per case cost. The robotic platform is also designed to include a mast, a boom and wheels for optimal configurability for a variety of surgical indications and the ability to be maneuvered around the operating room and surgical centers where applicable.

As part of the development of the SPORT™ Surgical System, the Company is also developing a robust training curriculum and post-training assessment for surgeons and surgical teams. The training curriculum includes cognitive pre-training, psychomotor skills training, team training, troubleshooting and an overview of safety. Post-training assessment includes the design of assessment tools and validating the assessment tools. The Company previously announced that it has signed an agreement with the James and Sylvia Earl, Simulation to Advance Innovation and Learning (SAIL) Center at Anne Arundel Medical Center (AAMC) in Annapolis, MD, for the development of the training curriculum and post-training assessment.

The Company continuously evaluates its technologies under development for intellectual property protection through a combination of trade secrets and patent application filings. As of January 31, 2016, the Company had ownership or certain exclusive rights to eleven U.S. patents and twenty-nine patent applications filed in various jurisdictions. The Company anticipates expanding its intellectual property portfolio by filing patent applications as it progresses in the development of robotic surgical technologies and by licensing suitable technologies.

As part of its development and commercialization efforts, the Company has established certain milestones that it uses to assess its progress towards developing commercially viable robotic surgical technologies. These milestones relate to technology and design advancements as well as to dates for clinical testing and completing regulatory submissions. To assess progress, the Company regularly tests and evaluates its technology. If such evaluations indicate technical defects or failure to meet cost or performance goals, the Company's commercialization schedule could be delayed and potential purchasers of its initial commercial systems may decline to purchase them or choose to purchase alternative technologies. See "Risk Factors".

Among other things, the future success of the Company is substantially dependent on continuing its research and development program. In addition to being capital intensive, research and development activities relating to sophisticated technologies that the Company develops are inherently uncertain as to future success and the achievement of desired results. If delays or problems occur during the Company's ongoing research and development activities, important financial and human resources may need to be diverted toward resolving such delays or problems. Further, there is material risk that the Company's research and development activities may not result in a functional, commercially viable product or one that is approved by regulatory authorities. See "Risk Factors".

**Development Objectives**

The Company uses a combination of internal resources and external development firms to execute the research and development and commercialization plan for the Company's robotic surgical system.

The Company's current plan is to focus on the development and commercialization of the SPORT™ Surgical System at estimated costs, and according to the timeline, as set forth in the table below. As of December 31, 2015, the Company has completed its alpha commercial prototype, tissue testing using components of the SPORT™ Surgical System, design and testing of the feasibility prototype, and completion of two SPORT™ Surgical Systems for engineering verification.

Based on "voice of customer" feedback and consultations with the medical technology development firms engaged by the Company and the Surgeon Advisory Board, the Company has decided to build additional prototypes and develop more advanced instruments and training systems for expanded use for additional surgical procedures. The Company is pursuing a broad set of surgical indications including general abdominal, gynecologic and urologic and colo-rectal procedures for the SPORT™ Surgical System. The Company anticipates costs related to the commercialization and regulatory approval of the SPORT™ Surgical System to be as set out in the table below. Certain estimated costs set out in the table below are greater than those set out in the comparable table in the AIF and the Company's base shelf prospectus dated August 18, 2015. Such additional costs relate primarily to the production of 11 engineering, first-in-human and clinical trial units to be used for regulatory approval and marketing purposes. According to the projected development schedule, as further described in the table below, the Company reasonably expects that it will complete the build of five first "in human" units in the first quarter of 2016. The estimated cost to build these 5 first in-human units has increased from initial disclosed forecasts by $4.4 million to $14.0 million. This increase is due primarily to a higher cost of parts than forecast, the need to rework certain parts to satisfy design requirements, delay in receiving parts from suppliers, the development of a commercialization plan (including hiring 3 new senior staff) and the design of a transition plan to manufacturing.

The Company's development milestones, estimated costs and schedule for completion, in each case as at December 31, 2015, are set out below.

| ***Development Milestone*** | ***Estimated Cost (in US $)*** [(1)] | ***Schedule for Milestone Completion*** | ***Comments*** |
|---|---|---|---|
| **Alpha commercial prototype design complete** (Design of prototype suitable for ongoing tissue testing) | - | Q1 2014 | *Completed* |
| **Alpha commercial prototype built** | - | Q2 2014 | *Completed* |
| **Tissue testing** (Testing performance of individual features and functionality) | - | Q2 2014 | *Completed* |
| **Design and test of feasibility prototype complete** (Demonstrate feasibility for next generation console and advanced instruments) | - | Q1 2015 | *Completed* |

| *Development Milestone* | *Estimated Cost (in US $)*[1] | *Schedule for Milestone Completion* | *Comments* |
|---|---|---|---|
| **Units built and ready for engineering verification**<br>(Prototype is formally tested to meet previously defined specifications) | (2 milestones) | | |
| Build 2 engineering verification units | - | Q4 2015 | Completed |
| Build 5 first in-human units[2] | $14 million[3] | Q1 2016<br>*Expected* | |
| **Early human feasibility report complete**<br>(Human clinical cases utilizing units are tested under engineering verification) | $13 million<br>(2 milestones) | Q2 2016<br>*Expected* | First in human studies confirm capabilities of SPORT™ Surgical System for expanded use.<br>Build 4 additional Human clinical trial units. |
| **Audit for CE Mark approval commenced** | | Q2 2016<br>*Expected* | |
| **Pivotal Human clinical trial commenced** | $12 million | Q3 2016<br>*Expected* | |
| **Pivotal Human clinical trial completed and 510(k) application submitted to FDA** | $5 million<br>(3 milestones) | Q4 2016<br>*Expected* | |
| **Outside U.S. commercial launch**<br>(Pending CE Mark approval) | | Q4 2016<br>*Expected* | |
| **U.S. commercial launch**<br>(Pending 510(k) market clearance) | | Mid-2017<br>*Expected* | |
| **TOTAL** | **US $44 million** | | |

Notes:

(1) These estimated costs are management's estimate, as at December 31, 2015, of the applicable development cost associated with each milestone and include the total corporate estimated general and administrative expenses.

(2) The schedule for completion of the build of 5 first-in human units has been changed to Q1 2016 from Q4 2015 to more accurately reflect realistic completion and delivery dates in line with commencement of clinical trials.

(3) The estimated cost to build the 5 first in-human units has increased by $4.4 million to $14.0 million. This increase is due primarily to a higher cost of parts than forecast, the need to rework certain parts to satisfy design requirements, delay in receiving parts from suppliers, the development of a commercialization plan (including hiring 3 new senior staff) and the design of a transition plan to manufacturing. To date, we have spent approximately US $4.7 million from the net proceeds of the Company's November 2015 offering of units towards the build of the 5 first in-human units.

(4) The cost of future milestones have been reviewed and revised to reflect revisions to currently estimated forecast requirements to complete the milestones based on supplier inputs and Titan requirements.

Upon completion of the development of the SPORT™ Surgical System and following receipt of all applicable regulatory approvals in the United States, Europe, and/or Asia, the Company intends to utilize a direct sales force and/or distribution partner(s) to initiate marketing the SPORT™ Surgical System to hospitals.

Due to the nature of technology research and development, there is no assurance that these objectives will be achieved, and there can be no assurance with respect to the time or resources that may be required. The Company expects that additional specific milestones could be identified as the development and commercialization of its SPORT™ Surgical System progresses. The total costs to complete the development and commercialization of the Company's SPORT™ Surgical System as referenced above are only an estimate based on current information available to the Company and cannot yet be determined with a high degree of certainty, and the costs may be substantially higher than estimated. See "Special Note Regarding Forward-Looking Statements" and "Risk Factors".

**Market Opportunity**

The Company's robotic surgical system is being designed to address the growing robotic surgery market. The size of the market for robotic surgical systems is estimated by Grand View Research to grow from approximately US $7.5 billion in 2014 to US $17.9 billion by 2022.

*Robotic Surgery*

Today's medical surgery industry is built on a combination of mature and evolving surgical techniques that use evolving technology to perform surgery. Currently, the main form of surgery is open surgery. Although performed on a daily basis, open surgery requires large incisions, posing several problems to both the patient and hospital. The increased trauma to the patient causes both recovery times and hospitalization to be longer and more expensive. Also, larger incisions cause more pain and scarring than minimally invasive surgical techniques. MIS has been evolving over the past 25 years and reduces trauma to the patient thus resulting in fewer complications, reduced hospital stays and shorter patient recovery times. Techniques used in MIS are performed through small ports rather than large incisions that are required in open surgery. However, the acceptance of MIS has not increased in more complex surgery.

The shortcomings of both open surgery and MIS have led to the introduction of robots within the surgical industry. Robotic or computer-assisted surgical technologies represent the next generation in the evolution of surgical procedure. The objectives of robotic systems are to provide surgeons with tools to allow complex procedures to be performed repeatedly with greater precision, while offering improved vision and control. The use of robotics is intended to empower surgeons to employ improved techniques and assist in reducing the risks associated with complex surgeries.

*Market Acceptance*

To date, robotic surgical technologies have been employed in urology, gynecology, colon and rectal surgery, cardiothoracic surgery, general surgery, head and neck surgery, orthopedic surgery, neurosurgery, and catheter-based interventional cardiology and radiology.

The success of robotic technologies in these applications has led to the growing adoption and commercialization of these technologies in the medical industry. Although robotic surgical procedures have been gaining substantial acceptance, the industry is still in its infancy. The technology available is becoming more sophisticated in order to overcome technical hurdles that are currently encountered. The end objective is to overcome the limitations of fixed port access, limited dexterity and visualization.

*Competitive Conditions*

The industry leader within the robotic surgical market is Intuitive Surgical, Inc. (NASDAQ: ISRG), maker of the da Vinci® Surgical System. In addition, there are a number of companies reported to be currently using or planning to use robotics and computers in surgery, including Verb Surgical Inc. (founded as a partnership between Verily, formerly Google Life Sciences, and Ethicon, a medical device subsidiary of Johnson & Johnson), Medrobotics, Applied Dexterity, Medtronic, Transenterix and Meere Company Inc. Any company with substantial experience in industrial robotics could potentially expand into the field of surgical robotics and become a potential competitor.

## RECENT DEVELOPMENTS

On May 5, 2015, the Company announced that it had signed an agreement with the James and Sylvia Earl, Simulation to Advance Innovation and Learning (SAIL) Center at Anne Arundel Medical Center (AAMC) in Annapolis, MD, for the development of the training curriculum and post-training assessment of surgeons and surgical teams who would use the SPORT™ Surgical System.

On June 8, 2015, the Company entered into an option agreement (the "Option Agreement") with Platform Imaging, LLC ("Platform") whereby Platform granted the Company an option (the "Option") to negotiate a license agreement ("License Agreement") to have exclusive rights to practice the inventions set forth in the patents for Markerless Tracking of Robotic Surgical Tools for incorporation in the Company's SPORT™ Surgical System and to distribute such product thereafter. Under the terms of the Option Agreement, the Company will pay to Platform a non-refundable option fee of $300,000 as follows: (i) $100,000 upon signing the Option Agreement; (ii) $100,000 on January 2, 2016; and (iii) $100,000 on October 1, 2016. In addition, the Company shall have the right at any time up to and including January 2, 2017, to exercise the Option by paying a fee of $1.3 million for those rights, payable upon execution of a License Agreement. A member of the Company's senior management is also a director, member of the Platform senior management team, co-inventor of the technology, co-founder of Platform and a significant shareholder of Platform.

On July 30, 2015, the Company entered into an agreement with BSI Group America Inc. ("BSI"), a recognized European Notified Body, for BSI to perform the necessary assessments so as to certify Titan's quality system for compliance with international and European requirements, as required for medical devices marketed in the European Union.

In the third quarter of 2015, the Company moved the schedule for completion of the first five in-human units to the first quarter of 2016 to support the early human feasibility report, scheduled for completion in the second quarter of 2016. The Company also announced that it continued discussions to confirm custom manufacturers of the SPORT™ Surgical System. The Company subsequently revised the estimated costs to build the 5 first in-human units, noting that such costs had increased by $4.4 million to $14.0 million. This increase is due primarily to a higher cost of parts than forecast, the need to rework certain parts to satisfy design requirements, delay in receiving parts from suppliers by the development of a commercialization plan including hiring 3 new senior staff and the design of a transition plan to manufacturing.

On September 7, 2015, the Company entered into a master services agreement with Chiltern International, Inc. ("Chiltern"), formerly Theorem CR, Inc., which will allow the parties to negotiate the provision of clinical trial research services to be provided by Chiltern to Titan from time to time, without having to re-negotiate the terms and conditions for each such service.

On October 30, 2015, the Company entered into a letter agreement (the "Letter Agreement") with Longtai Medical Inc. ("Longtai"). Under the terms of the Letter Agreement, on November 23, 2015, Longtai subscribed for and purchased US $4,000,000 worth of Common Shares under a private placement, at a subscription price of CDN $1.23 per Common Share. In the Letter Agreement, the Company granted to Longtai exclusive rights to negotiate with the Company for an exclusive marketing, sales and distribution agreement for the Company's SPORT™ Surgical System in the Asia Pacific region (the "Distributorship Agreement") for a period of 183 days commencing at closing of the private placement. Additionally, Longtai paid to the Company US $2,000,000 as a deposit toward the Distributorship Agreement ("Distributorship Deposit"), which would be repaid to Longtai in the event that the Distributorship Agreement is not entered into within such 183 day period. Concurrently with the signing of the

Distributorship Agreement, Longtai has agreed to subscribe for and purchase an additional US $4,000,000 worth of Common Shares at a subscription price equal to the 5-day volume weighted average price of the Common Shares on the TSX (less a 12.5% discount). If the Distributorship Agreement is executed and the second US $4,000,000 private placement is completed, the Company shall retain US $1,400,000 of the Distributorship Deposit and repay US $600,000 to Longtai.

On November 30, 2015, the Company entered into an agreement with Cadence Device, Inc., a wholly-owned subsidiary of Cadence, Inc. ("Cadence"). Under the terms of that agreement, Cadence agreed to develop, manufacture and manage the supply chain, sterilization and distribution for multi-articulating robotic instruments for use with Titan's SPORT™ Surgical System.

The Company entered into a license agreement with Mayo Foundation for Medical Education and Research effective December 14, 2015 pursuant to which Titan received a license to certain patent rights in the field of robotic surgical procedures and systems for colorectal surgery.

During the fourth quarter of 2015, the Company completed the build of two SPORT™ Surgical Systems prototype units for engineering verification. The Company subsequently demonstrated one of these units at an event held in New York on January 20 and 21, 2016.

## PRICE RANGE OF LISTED SECURITIES

The Common Shares are listed for trading in Canada on the TSX under the symbol "TMD". The Common Shares are also traded on the international tier of the OTCQX market in the United States under the symbol "TITXF". The Company also has six classes of warrants listed on the TSX under the symbols TMD.WT.A, TMD.WT.B, TMD.WT.C, TMD.WT.D, TMD.WT.E and TMD.WT.F.

### Summary of Monthly Trading – Common Shares

The following table shows the high and low trading prices and the volume of common shares of the Company traded on the TSX for each of the last 12 months (as reported by the TSX).

| Month | High (CDN $) | Low (CDN $) | Volume |
|---|---|---|---|
| **2015** | | | |
| **February** | 2.18 | 1.76 | 1,522,005 |
| **March** | 1.88 | 1.61 | 812,448 |
| **April** | 1.85 | 1.54 | 937,052 |
| **May** | 1.79 | 1.48 | 1,300,965 |
| **June** | 1.75 | 1.53 | 526,223 |
| **July** | 1.65 | 1.21 | 1,040,101 |
| **August** | 1.57 | 1.30 | 617,152 |
| **September** | 1.50 | 1.34 | 508,452 |
| **October** | 1.40 | 1.28 | 842,920 |
| **November** | 1.59 | 1.01 | 5,902,449 |
| **December** | 1.14 | 0.97 | 1,534,890 |
| **2016** | | | |
| **January** | 1.35 | 1.00 | 1,429,463 |
| **February 1 - 8** | 1.83 | 0.77 | 6,414,326 |

**Summary of Monthly Trading – December 2015 Warrants**

On December 10, 2010, the Company issued 5,000,000 warrants which expired December 15, 2015, each exercisable for one common share of the Company for CDN $1.85 (the "December 2015 Warrants"). The December 2015 Warrants were, until their expiry, listed for trading on the TSX under the symbol "TMD.WT". The following table shows the high and low trading prices and the volume of December 2015 Warrants traded on the TSX for each of the last 12 months (as reported by the TSX).

| Month | High (CDN $) | Low (CDN $) | Volume |
|---|---|---|---|
| **2015** | | | |
| **February** | 0.40 | 0.23 | 151,400 |
| **March** | 0.25 | 0.22 | 78,500 |
| **April** | 0.25 | 0.16 | 122,000 |
| **May** | 0.19 | 0.10 | 110,750 |
| **June** | 0.19 | 0.09 | 167,750 |
| **July** | 0.10 | 0.10 | 0 |
| **August** | 0.10 | 0.07 | 49,800 |
| **September** | 0.08 | 0.07 | 25,000 |
| **October** | 0.03 | 0.02 | 75,000 |
| **November** | 0.03 | 0.01 | 394,000 |
| **December 1 - 15** | 0.005 | 0.005 | 33,500 |

**Summary of Monthly Trading – June 2016 Warrants**

On June 21, 2011, the Company issued 5,577,500 warrants expiring June 21, 2016, each exercisable for one common share of the Company for CDN $2.00 (the "June 2016 Warrants"). The June 2016 Warrants are listed for trading on the TSX under the symbol "TMD.WT.A". The following table shows the high and low trading prices and the volume of June 2016 Warrants traded on the TSX for each of the last 12 months (as reported by the TSX).

| Month | High (CDN $) | Low (CDN $) | Volume |
|---|---|---|---|
| **2015** | | | |
| **February** | 0.26 | 0.25 | 500 |
| **March** | 0.25 | 0.15 | 11,500 |
| **April** | 0.29 | 0.18 | 33,100 |
| **May** | 0.27 | 0.15 | 4,500 |
| **June** | 0.28 | 0.27 | 1,000 |
| **July** | 0.27 | 0.19 | 12,000 |
| **August** | 0.23 | 0.16 | 11,000 |
| **September** | 0.20 | 0.16 | 1,500 |
| **October** | 0.20 | 0.10 | 24,900 |
| **November** | 0.13 | 0.02 | 194,900 |
| **December** | 0.06 | 0.04 | 40,530 |
| **2016** | | | |
| **January** | 0.06 | 0.05 | 36,500 |

| Month | High (CDN $) | Low (CDN $) | Volume |
|---|---|---|---|
| **February 1 - 8** | 0.055 | 0.04 | 155,500 |

**Summary of Monthly Trading – December 2016 Warrants**

On December 22, 2011 the Company issued 4,880,000 warrants expiring December 22, 2016, each exercisable for one common share of the Company for CDN $1.75 (the "December 2016 Warrants"). The December 2016 Warrants are listed for trading on the TSX under the symbol "TMD.WT.B". The following table shows the high and low trading prices and the volume of December 2016 Warrants traded on the TSX for each of the last 12 months (as reported by the TSX).

| Month | High (CDN $) | Low (CDN $) | Volume |
|---|---|---|---|
| **2015** | | | |
| **February** | - | - | 0 |
| **March** | - | - | 0 |
| **April** | 0.59 | 0.26 | 60,000 |
| **May** | 0.26 | 0.26 | 20,300 |
| **June** | 0.29 | 0.26 | 42,000 |
| **July** | 0.26 | 0.22 | 2,000 |
| **August** | 0.25 | 0.19 | 49,500 |
| **September** | 0.19 | 0.19 | 200 |
| **October** | 0.16 | 0.11 | 4,620 |
| **November** | 0.15 | 0.02 | 282,700 |
| **December** | 0.11 | 0.08 | 78,900 |
| **2016** | | | |
| **January** | - | - | - |
| **February 1 - 8** | 0.19 | 0.19 | 5,000 |

**Summary of Monthly Trading – March 2018 Warrants**

On March 13, 2013 the Company issued 6,260,763 warrants expiring March 13, 2018, each exercisable for one common share of the Company for CDN $1.25 (the "March 2018 Warrants"). The March 2018 Warrants are listed for trading on the TSX under the symbol "TMD.WT.C". The following table shows the high and low trading prices and the volume of March 2018 Warrants traded on the TSX for each of the last 12 months (as reported by the TSX).

| Month | High (CDN $) | Low (CDN $) | Volume |
|---|---|---|---|
| **2015** | | | |
| **February** | 1.00 | 0.80 | 34,800 |
| **March** | 0.84 | 0.75 | 3,000 |
| **April** | 0.75 | 0.65 | 8,950 |
| **May** | 0.75 | 0.70 | 10,236 |
| **June** | 0.75 | 0.57 | 12,000 |
| **July** | 0.70 | 0.48 | 6,500 |
| **August** | 0.76 | 0.50 | 2,186 |

| Month | High (CDN $) | Low (CDN $) | Volume |
|---|---|---|---|
| **September** | 0.68 | 0.63 | 5,000 |
| **October** | 0.63 | 0.40 | 67,000 |
| **November** | 0.40 | 0.24 | 312,300 |
| **December** | 0.29 | 0.22 | 80,600 |
| **2016** | | | |
| **January** | 0.40 | 0.25 | 97,700 |
| **February 1 - 8** | 0.41 | 0.25 | 29,000 |

**Summary of Monthly Trading – February 2017 Warrants**

On February 19, 2014 the Company issued 9,142,500 warrants expiring February 19, 2017, each exercisable for one common share of the Company for CDN $2.00 (the "February 2017 Warrants"). The February 2017 Warrants are listed for trading on the TSX under the symbol "TMD.WT.D". The following table shows the high and low trading prices and the volume of February 2017 Warrants traded on the TSX for each of the last 12 months (as reported by the TSX).

| Month | High (CDN $) | Low (CDN $) | Volume |
|---|---|---|---|
| **2015** | | | |
| **February** | 0.35 | 0.21 | 116,578 |
| **March** | 0.26 | 0.15 | 19,500 |
| **April** | 0.28 | 0.18 | 145,200 |
| **May** | 0.30 | 0.18 | 26,500 |
| **June** | 0.27 | 0.25 | 11,000 |
| **July** | 0.26 | 0.19 | 38,188 |
| **August** | 0.19 | 0.19 | 500 |
| **September** | 0.20 | 0.19 | 25500 |
| **October** | 0.21 | 0.13 | 56,400 |
| **November** | 0.16 | 0.04 | 657,699 |
| **December** | 0.08 | 0.06 | 393,867 |
| **2016** | | | |
| **January** | 0.08 | 0.06 | 209,300 |
| **February 1 - 8** | - | - | - |

**Summary of Monthly Trading – April 2017 Warrants**

Titan issued 12,203,189 warrants on April 23, 2014, with each warrant, entitling the holder thereof to purchase one Common Share for $2.75 until April 23, 2017 (the "April 2017 Warrants"). The April 2017 Warrants are listed for trading on the TSX under the symbol "TMD.WT.E". The following table shows the high and low trading prices and the volume of the April 2017 Warrants traded on the TSX for each of the last 12 months (as reported by the TSX).

| Month | High (CDN $) | Low (CDN $) | Volume |
|---|---|---|---|
| **2015** | | | |
| **February** | 0.19 | 0.15 | 57,000 |

| Month | High (CDN $) | Low (CDN $) | Volume |
|---|---|---|---|
| **March** | 0.29 | 0.12 | 103,473 |
| **April** | 0.20 | 0.13 | 65,223 |
| **May** | 0.19 | 0.13 | 12,000 |
| **June** | 0.19 | 0.11 | 14,000 |
| **July** | 0.14 | 0.09 | 8,200 |
| **August** | 0.13 | 0.10 | 15,000 |
| **September** | 0.12 | 0.10 | 26,000 |
| **October** | 0.11 | 0.07 | 135,100 |
| **November** | 0.12 | 0.03 | 118,000 |
| **December** | 0.08 | 0.03 | 8,000 |
| **2016** | | | |
| **January** | 0.08 | 0.03 | 8,000 |
| **February 1 - 8** | 0.08 | 0.04 | 53,000 |

**Summary of Monthly Trading – November 2020 Warrants**

Titan issued 7,012,195 warrants on November 16, 2015, with each warrant, entitling the holder thereof to purchase one Common Share for $1.60 until November 16, 2020 (the "November 2020 Warrants"). The November 2020 Warrants are listed for trading on the TSX under the symbol "TMD.WT.F". The following table shows the high and low trading prices and the volume of the November 2020 Warrants traded on the TSX for each month since the date of their issuance (as reported by the TSX).

| Month | High (CDN $) | Low (CDN $) | Volume |
|---|---|---|---|
| **2015** | | | |
| **November** | 0.21 | 0.15 | 1,349,874 |
| **December** | 0.195 | 0.135 | 417,302 |
| **2016** | | | |
| **January** | 0.22 | 0.15 | 210,400 |
| **February 1 - 8** | 0.41 | 0.10 | 1,748,642 |

## PRIOR SALES

The following tables summarize the common shares or securities convertible into, or exercisable to acquire, common shares that have been issued by the Company during the 12 months prior to the date of this prospectus supplement:

Common Shares issued[(1)]:

| Date | Price Per Common Share (CDN $) | Number of Common Shares Issued |
|---|---|---|
| February 17, 2015 | $1.05 | 11,725[(4)] |
| February 6, 2015 | $1.05 | 4,550[(4)] |
| March 5, 2015 | $0.56 | 5,000[(2)] |
| May 28, 2015 | $0.56 | 15,000[(2)] |
| June 10, 2015 | $1.25 | 40,000[(3)] |

| Date | Price Per Common Share (CDN $) | Number of Common Shares Issued |
|---|---|---|
| July 10, 2015 | $0.32 | 39,000(2) |
| July 13, 2015 | $0.32 | 37,000(2) |
| August 26, 2015 | $0.68 | 50,000 (2) |
| September 21, 2015 | $0.64 | 10,000 (2) |
| October 5, 2015 | $0.32 | 50,000(2) |
| November 16, 2015 | $1.23 | 9,349,593(5) |
| November 23, 2015 | $1.23 | 4,290,280(6) |
| January 12, 2016 | $0.56 | 4,000(2) |
| January 21, 2016 | $1.05 | 130,839(7) |
| February 2, 2016 | $0.56 | 5,000(2) |

**Notes:**
(1) Does not include common shares issuable to Longtai in connection with the Letter Agreement.
(2) Issued upon the exercise of options that were previously issued by the Company.
(3) Issued pursuant to the exercise of warrants that were offered as part of a unit pursuant to a prospectus supplement dated March 7, 2013.
(4) Issued upon the exercise of broker warrants previously issued by the Company in connection with prior offerings.
(5) Issued pursuant to the prospectus supplement of the Company dated November 6, 2015.
(6) Issued pursuant to the Longtai Letter Agreement.
(7) Issued pursuant to a License Agreement regarding services to be provided by Mayo Foundation.

Stock options issued:

| Date | Exercise Price (CDN $) | Number of Stock Options Granted |
|---|---|---|
| August 11, 2015 | $1.51 | 16,796 |
| June 9, 2015 | $1.72 | 684,751 |
| December 16, 2014 | $1.39 | 19,746 |
| December 23, 2015 | $1.02 | 272,612 |

## DESCRIPTION OF OFFERED SECURITIES

The Offering consists of a minimum of 11,111,111 Units and a maximum of 12,222,222 Units, each Unit consisting of one Offered Share and one Warrant. Each whole Warrant entitles the holder to purchase one Warrant Share at a price of CDN $1.00, subject to adjustment, at any time following the closing of this Offering until 5:00 p.m. (Toronto time) on the date that is 60 months after the closing of the Offering. The Units will immediately separate into Offered Shares and Warrants upon issuance.

### Offered Shares

The authorized capital of the Company consists of an unlimited number of common shares. As at December 31, 2015, there were 116,457,486 common shares of the Company issued and outstanding. As at February 8, 2016, there were 116,597,325 common shares of the Company issued and outstanding. Assuming completion of the Minimum Offering, there will be an aggregate of 127,708,436 common shares issued (without giving effect to Over-Allotment Option) and outstanding and assuming completion of the Maximum Offering, there will be an aggregate of 128,819,547 common shares issued and outstanding (130,652,880 common shares if the Over-Allotment Option is exercised in full for Over-Allotment Units, assuming no further exercises or issuances of convertible securities).

The holders of common shares are entitled to receive notice of and to attend all annual and special meetings of the Company's shareholders and to one vote in respect of each common share held at the record date for each such meeting. The holders of common shares are entitled, at the discretion of the Board of Directors, to receive out of any or all of the Company's profits or surplus properly available for the payment of dividends, any dividend declared by the Board of Directors and payable by the Company on the common shares. The holders of the common shares will participate *pro rata* in any distribution of the assets of the Company upon liquidation, dissolution or winding-up or other distribution of the assets of the Company. Such participation will be subject to the rights, privileges, restrictions and conditions attached to any of the Company's securities issued and outstanding at such time ranking in priority to the common shares upon the liquidation, dissolution or winding-up of the Company. Common shares

are issued only as fully paid and are non-assessable. Common shares will only be issued through the book-based system administered by CDS, except in limited circumstances. See "Book-Based System".

**Warrants**

The Warrants will be governed by the terms of a warrant indenture (the "Warrant Indenture") to be entered into between the Company and Computershare Trust Company of Canada, as warrant agent thereunder (the "Warrant Agent"). The Company will appoint the principal transfer offices of the Warrant Agent in Toronto, Ontario as the location at which Warrants may be surrendered for exercise or transfer. The following summary of certain provisions of the Warrant Indenture contains all of the material attributes and characteristics of the Warrants but does not purport to be complete and is qualified in its entirety by reference to the provisions of the Warrant Indenture.

Each whole Warrant will entitle the holder to purchase one Warrant Share at a price of CDN $1.00. The exercise price and the number of Warrant Shares issuable upon exercise are both subject to adjustment in certain circumstances as more fully described below. Warrants will be exercisable at any time prior to 5:00 p.m. (Toronto time) on the date that is 60 months after the closing of the Offering ("Warrant Expiry Time"). **WARRANTS NOT EXERCISED PRIOR TO THE WARRANT EXPIRY TIME WILL BE VOID AND OF NO VALUE.**

The exercise price for the Warrants will be payable in Canadian dollars.

The Warrant Indenture will provide for adjustment in the number of Warrant Shares issuable upon the exercise of the Warrants and/or the exercise price per Warrant Share upon the occurrence of certain events, including:

(i) the issuance of common shares or securities exchangeable for or convertible into common shares to holders of all or substantially all of the Company's common shares by way of stock dividend or other distribution (other than a "dividend paid in the ordinary course", as defined in the Warrant Indenture, or a distribution of common shares upon the exercise of the Warrants or pursuant to the exercise of director, officer or employee stock options granted under the Company's stock option plan);

(ii) the subdivision, redivision or change of the common shares into a greater number of shares;

(iii) the reduction, combination or consolidation of the common shares into a lesser number of shares;

(iv) the fixing of a record date for the issue of rights, options or warrants to all or substantially all of the holders of the common shares under which such holders are entitled, during a period expiring not more than 45 days after the record date for such issuance, to subscribe for or purchase common shares, or securities exchangeable for or convertible into common shares, at a price per share to the holder (or having an exchange or conversion price per share) of less than 95% of the "current market price", as defined in the Warrant Indenture, for the common shares on such record date; and

(v) the issuance or distribution to all or substantially all of the holders of the securities of the Company including shares, rights, options or warrants to acquire shares of any class or securities exchangeable or convertible into any such shares or cash, property or assets and including evidences of indebtedness, or any cash, property or other assets.

The Warrant Indenture will also provide for adjustment in the class and/or number of securities issuable upon the exercise of the Warrants and/or exercise price per security in the event of the following additional events: (1) reclassifications of the common shares; (2) consolidations, amalgamations, plans of arrangement or mergers of the Company with or into another entity (other than consolidations, amalgamations, plans of arrangement or mergers which do not result in any reclassification of the common shares or a change or exchange of the common shares into other shares); or (3) the transfer of the undertaking or assets of the Company as an entirety or substantially as an entirety to another Company or other entity.

No adjustment in the exercise price or the number of Warrant Shares purchasable upon the exercise of the Warrants will be required to be made unless the cumulative effect of such adjustment or adjustments would change the exercise price by at least 1% or the number of Warrant Shares purchasable upon exercise by at least one one-

hundredth of a Warrant Share. Further, no adjustment will be made for common shares issued: (1) upon exercise of the Warrants, (2) pursuant to any dividend reinvestment or similar plan adopted by the Company; (3) pursuant to stock option or purchase plans, as payment of interest on outstanding notes, in connection with strategic license agreements or other partnering arrangements; or (4) in connection with a strategic merger, consolidation or purchase of substantially all of the securities or assets of a corporation or other entity.

The Company will also covenant in the Warrant Indenture that, during the period in which the Warrants are exercisable, it will give notice to holders of Warrants of certain stated events, including events that would result in an adjustment to the exercise price for the Warrants or the number of Warrant Shares issuable upon exercise of the Warrants, at least 10 days prior to the record date or effective date, as the case may be, of such event.

If a Warrant holder is entitled to a fraction of a Warrant, the number of Warrants issued to that Warrant holder shall be rounded down to the nearest whole Warrant. No fractional Warrant Shares will be issuable upon the exercise of any Warrants; instead cash will be paid in lieu of fractional shares. Holders of Warrants will not have any voting rights or any other rights which a holder of common shares would have.

The Warrants will not be exercisable in the United States or by or on behalf of a U.S. Person, nor will certificates representing the common shares issuable upon exercise of the Warrants be registered or delivered to an address in the United States, unless an exemption from registration under the U.S. Securities Act and any applicable state securities laws is available and the Company has received an opinion of counsel of recognized standing to such effect in form and substance reasonably satisfactory to the Company.

From time to time, the Company (when properly authorized) and the Warrant Agent, subject to the provisions of the Warrant Indenture, may amend or supplement the Warrant Indenture for certain purposes. Certain amendments or supplements to the Warrant Indenture may only be made by "extraordinary resolution", which is defined in the Warrant Indenture as a resolution either (1) passed at a meeting of the holders of Warrants at which there are holders of Warrants present in person or represented by proxy representing at least 25% of the aggregate number of the then outstanding Warrants and passed by the affirmative vote of holders of Warrants representing not less than 66⅔% of the aggregate number of all the then outstanding Warrants represented at the meeting and voted on such resolution or (2) adopted by an instrument in writing signed by the holders of Warrants representing not less than 66⅔% of the aggregate number of all of the then outstanding Warrants.

**In the event that the TSX listing requirements for the Warrants are not satisfied, there will be no market through which the Warrants may be sold and purchasers may not be able to resell the Warrants purchased in the Offering. This may affect the pricing of the Warrants in the secondary market, the transparency and availability of trading prices, the liquidity of the Warrants, and the extent of issuer regulation.**

**Book-Based System**

Registration of interests in, and transfers of, the Offered Shares and Warrants will be made only through the book-based system of CDS. On the date of closing of the Offering, the Company will deliver to CDS certificates evidencing the aggregate number of Offered Shares and Warrants subscribed for under the Offering. Offered Shares and Warrants must be purchased and transferred only through a CDS Participant. All rights of an owner of Offered Shares must be exercised through, and all payments or other property to which such owner is entitled will be made or delivered by, CDS or the CDS Participant through which the owner holds such Offered Shares or Warrants. Upon purchase of any Offered Shares or Warrants, the owner will receive only the customary confirmation. References in this prospectus supplement to a holder of Offered Shares or Warrants means, unless the context otherwise requires, the owner of the beneficial interest in such Offered Shares or Warrants. Physical certificates evidencing Offered Shares and Warrants will not be issued except in limited circumstance and unless a request for a certificate is made to the Company. Physical certificates evidencing the Offered Shares and Warrants will be distributed to purchasers in the United States and in limited circumstances.

The Company and the Agent will not have any liability for (i) records maintained by CDS relating to the beneficial interests in the Offered Shares, Warrants or the book-based accounts maintained by CDS; (ii) maintaining, supervising or reviewing any records relating to such beneficial ownership interests; or (iii) any advice or

representation made or given by CDS and made or given with respect to the rules and regulations of CDS or any action taken by CDS or at the direction of the CDS Participants.

The ability of a beneficial owner of Offered Shares or Warrants to pledge such Offered Shares or Warrants or otherwise take action with respect to such owner's interest in such Offered Shares or Warrants (other than through a CDS Participant) may be limited due to the lack of a physical certificate to the extent that such owner has not requested a physical certificate from the Company. The Company has the option to terminate registration of the Offered Shares and Warrants through the book-based system in which case certificates for Offered Shares or Warrants in fully registered form will be issued to beneficial owners of such Offered Shares or Warrants or to their nominees.

## CAPITALIZATION

The following summarizes the changes in the Company's capitalization as at September 30, 2015, the date of the most recently filed unaudited interim financial statements of the Company, with and without giving effect to the Offering.

| **Description of Capital** | **Outstanding as at September 30, 2015 (US $)** | **Outstanding as at January 31, 2016 before giving effect to the Offering (US $)** | **Outstanding as at September 30, 2015 after giving effect to the Minimum Offering (US $)**[(1)] | **Outstanding as at September 30, 2015 after giving effect to the Maximum Offering (US $)**[(1)] |
|---|---|---|---|---|
| Share Capital | $73,271,393 (102,767,613 shares) | $85,482,943 (116,592,385 shares) | $77,640,492 (113,878,724 shares[(2)]) | $78,109,008 (114,989,835 shares[(3)]) |
| Warrants | $8,172,562 (38,588,104 Warrants) | $6,035,602 (41,934,399 Warrants) | $10,167,949 (49,699,215 Warrants[(2)]) | $10,367,487 (50,810,326 Warrants[(3)]) |
| Contributed Surplus | $2,765,652 | $2,856,361 | $2,765,652 | $2,765,652 |
| Common Shares Underlying Stock Options | 2,775,151 shares | 3,539,053 shares | 2,775,151 shares | 2,775,151 Shares |

Notes:

(1) Does not include the exercise of any options, warrants and broker warrants since September 30, 2015. For details of the share issuances in connection with such exercises, please see "Prior Sales" in this prospectus supplement.

(2) Assuming no exercise of the Over-Allotment Option and no exercise of the Broker Warrants. Upon full exercise of the Broker Warrants issuable under the Minimum Offering there would be issued and outstanding 114,773,168 common shares and 50,476,992 Warrants.

(3) Assuming no exercise of the Over-Allotment Option and no exercise of the Broker Warrants. Upon full exercise of the Over-Allotment Option as well as full exercise of the Broker Warrants, including Broker Warrants granted on the Over-allotment Units, there would be issued and outstanding 117,807,057 common shares and 53,627,548 Warrants.

## USE OF PROCEEDS

### Proceeds and Funds Available

The Company intends to use the net proceeds from this offering to complete, in Q1 2016, the build of the previously identified 5 first-in-human units. The cost to build these 5 first in-human units has increased from the originally estimated $9.6 million to the current estimate of $14.0 million. This increase of $4.4 million is due primarily to a higher cost of parts than forecast, the need to rework certain parts to satisfy design requirements, delays in receiving

parts from suppliers, the development of a commercialization plan (including the hire of 3 new senior staff) and the design of a transition plan to manufacturing.

The Company will invest the net proceeds of the Offering in short-term interest bearing investment grade securities until required for use. Any additional proceeds received from the exercise of the Company's outstanding warrants will be used for research and development and for general corporate and working capital purposes.

The Company intends to use the net proceeds of the Offering as follows:

| | *Proceeds from the Minimum Offering*[1] | *Proceeds from the Maximum Offering*[1] |
|---|---|---|
| Build five first in-human units of its SPORT™ Surgical System[2] | US $5.7 million (CDN $8.0 million) | US $6.3 million (CDN $8.8 million) |
| Fund anticipated negative cash flow from operating activities and working capital | US $0.6 million (CDN $0.9 million) | US $0.7 million (CDN $1.0 million) |
| Total Net Proceeds | US $6.34 million (CDN $8.9 million) | US $7.0 million (CDN $9.8 million) |

Notes:

(1) Canadian figures are based on an exchange rate of USD $1 equals CDN $1.3921

(2) The estimated cost to build the 5 first in-human units has increased by $4.4 million to $14.0 million. This increase is due primarily to a higher cost of parts than forecast, the need to rework certain parts to satisfy design requirements, delay in receiving parts from suppliers, the development of a commercialization plan (including hiring 3 new senior staff) and the design of a transition plan to manufacturing. To date, we have spent approximately US $4.7 million from the net proceeds of the Company's November 2015 offering of units towards the build of the 5 first in-human units. A portion of the remaining proceeds from the November 2015 offering of units has been allocated towards the build of the first in-human units.

Please see "Business of the Company – Development Objectives" for a detailed description of the development milestones of the Company and the estimated costs associated therewith.

The Company intends to use the funds available to it as stated in this prospectus supplement; however, there may be circumstances where, for sound business reasons, a reallocation of funds may be deemed prudent or necessary. See "Risk Factors - Risks Relating to the Offering and the Units".

Additional funding will be required, despite completion of the Offering, for the development and commercialization of the SPORT™ Surgical System, currently estimated at approximately US $44 million. At December 31, 2015, management for the Company's unaudited estimate is that it had approximately US $11,197,573 in cash and cash equivalents and working capital of approximately US $1,373,401 excluding warrant liability. The Company anticipates that it will be able to continue to operate for 3 months from December 31, 2015 based on the current amount of its cash on hand and short term securities and its current rate of expenditures. If the full proceeds of the Minimum Offering are received by the Company, it is expected that the Company will be able to continue to operate for 3 months from December 2015 and if the full proceeds of the Maximum Offering are received by the Company, it is expected that the Company will be able to continue to operate for 3-4 months from December 2015, each expectation based on the current amount of its cash on hand, short term securities, the proceeds from the Offering and its current rate of expenditures. The Company expects that approximately US $27,000,000 in incremental funding will be required by the end of 2016 to maintain its currently anticipated pace of development. If additional funding is not available, the pace of the Company's development plan may be reduced and the Company may not be able to continue as a going concern. See "Risk Factors".

For the fiscal year ended December 31, 2014, cash used in operating activities by the Company was US $12,875,254 and the Company had a net loss of US $13,450,261. For the year ended December 31 2015, management's

unaudited estimate of cash used in operating activities by us was US $34,322,003 and it is estimated that the Company had a net loss of US $40,613,120. Management's unaudited estimate of our working capital as at December 31, 2015 was approximately US $1,373,401. We have not generated any revenue from product sales to date and it is possible that we will never have sufficient product sales revenue to achieve profitability and positive cash flow. We expect to continue to incur losses for at least the next several years as we and our development contractors pursue further development of the SPORT™ Surgical System, clinical trials and research and development efforts. To become profitable, we must successfully develop, manufacture, market and sell the SPORT™ Surgical System, as well as continue to identify, develop, manufacture and market new products. It is possible that we will never have significant product sales revenue. If funding is insufficient at any time in the future, we may not be able to develop or commercialize our products, take advantage of business opportunities or respond to competitive pressures. It is expected that some of the proceeds from the Offering will be used to fund anticipated negative cash flow from operating activities, as described above and detailed below. See "Risk Factors".

The net proceeds from the November 2015 offering of units have been applied to the build of the 5 first in-human units scheduled to be completed in Q1 2016. To date, we have spent approximately US $4.7 million towards the build of the 5 first in-human units.

## PLAN OF DISTRIBUTION

Pursuant to the Agency Agreement, the Company has agreed to sell and the Agent has agreed to arrange, on a best efforts basis, for purchasers of a minimum of 11,111,111 Units and a maximum of 12,222,222 Units at a price of CDN $0.90 per Unit payable in cash to the Company against delivery of the Units. The Units will immediately separate into Offered Shares and Warrants upon issuance. The Offering Price was determined by negotiation between the Company and the Agent. Closing of the Offering is anticipated to occur on or about February 12, 2016 subject to the conditions of closing being met, or such earlier or later date as the Company and the Agent may agree. There can be no assurance that any or all of the Units being offered will be sold.

The Offering will be subject to subscriptions being received for the Minimum Offering. All funds received by the Agent will be held in trust until the Minimum Offering has been attained. All subscription funds received by the Agent will be returned, without any deductions, to investors if the Minimum Offering is not attained by the Closing Time.

The Warrants will be created and issued pursuant to the terms of the Warrant Indenture. Each whole Warrant will entitle the holder thereof to purchase one Warrant Share at a price of CDN $1.00 per Warrant Share, subject to adjustment, at any time prior to 5:00 p.m. (Toronto time) on the date that is 60 months after the closing of the Offering, after which time the Warrants will expire and be void and of no value. The Warrant Indenture will contain provisions designed to protect the holders of Warrants against dilution upon the happening of certain events. No fractional common shares will be issued upon the exercise of any Warrants.

The obligations of the Agent under the Agency Agreement may be terminated by the Agent at any time at its sole discretion on the basis of its assessment of the state of the financial markets and on the occurrence of certain stated events. While the Agent has agreed to use its best efforts to sell the Units offered hereby, the Agent is not obligated to purchase Units that are not sold.

The Company has granted the Agent the Over-Allotment Option, exercisable in whole or in part at any time and from time to time on the Closing Date or for a period of 30 days following the Closing Date, to offer for sale such number of additional Units as is equal to 15% of the number of Units issued under the Offering, solely to cover over-allotments, if any, and for market stabilization purposes. The Over-Allotment Option may be exercised by the Agent in respect of Over-Allotment Units at the Offering Price, Over-Allotment Warrants at a price of CDN $0.25 per Over-Allotment Warrant and/or any combination of Over-Allotment Units and/or Over-Allotment Warrants so long as the aggregate number of Over-Allotment Units and/or Over-Allotment Warrants does not exceed 15% of the number of Units issued under the Offering (excluding those pursuant to the Over-Allotment Option). This prospectus supplement qualifies the grant of the Over-Allotment Option and the distribution of the Over-Allotment Units and/or the Over-Allotment Warrants. A purchaser who acquires securities forming part of the Agent's over-allocation position acquires those securities under this prospectus supplement, regardless of whether such over-

allocation position is ultimately filled through the exercise of the Over-Allotment Option or through secondary market purchases.

Subscriptions for the Units will be received subject to rejection or allotment in whole or in part and the right is reserved to close the subscription books at any time without notice. Pursuant to the Agency Agreement, the Company appointed the Agent to offer the Units to the public pursuant to the securities legislation of each of the provinces of British Columbia, Alberta and Ontario. The Units may also be offered for sale in the United States through the US Agent pursuant to exemptions from the registration requirements under the U.S. Securities Act and applicable state laws. In addition, the Agent is entitled to offer the Units outside of Canada and the United States to non-U.S. persons provided that the Agent shall not take any action in connection with the distribution of the Units that would result in the Company being obligated to comply with the prospectus, registration, reporting or other similar requirements of the securities laws of any jurisdiction.

In consideration of such services, the Company has agreed to pay the Agent's Commission of 7.0% of the gross proceeds of the Offering (or CDN $0.063 per Unit) sold by the Agent, including any proceeds raised through the sale of Units pursuant to the exercise of the Over-Allotment Option but excluding the gross proceeds raised through the sale of Units to Excluded U.S. Subscribers and President's List Subscribers.

The Company has also agreed to grant such number of Broker Warrants to the Agent as is equal to 7.0% of the aggregate number of Units issued pursuant to the Offering, including those Units issued pursuant to the Over-Allotment Option but excluding those Units issued to Excluded U.S. Subscribers and President's List Subscribers. Each whole Broker Warrant shall be exercisable for a period of 24 months following the Closing Date for one Broker Unit at an exercise price equal to the Offering Price. This prospectus supplement qualifies the grant of the Broker Warrants.

The Offering will be conducted under the book entry only system of CDS; accordingly, a subscriber who purchases Units will only receive a customer confirmation from the registered dealer that is a CDS participant from or through whom Units are purchased. CDS will record the CDS participants who hold securities on behalf of owners who have purchased or transferred securities in accordance with the book entry only system. Certificates evidencing Offered Shares, Warrants and Warrant Shares will not be issued unless a request for a certificate is made to the Company. Physical certificates evidencing the Offered Shares and Warrants will be distributed to purchasers in the United States who meet the definition of a U.S. Institutional Accredited Investor.

The TSX has conditionally approved the listing of the Offered Shares, the Warrant Shares, the Over-Allotment Shares (as defined herein), the Over-Allotment Warrant Shares (as defined herein), the Broker Unit Shares (as defined herein) and the Broker Unit Warrant Shares (as defined herein) distributed under this prospectus supplement. In addition, the TSX has conditionally approved the listing of the Warrants under the symbol TMD.WT.G. Listing will be subject to the Company fulfilling the listing requirements of the TSX including, in the case of the Warrants, distribution to a minimum number of public securityholders, on or before May 5, 2016. In the event that the TSX listing requirements for the Warrants are not satisfied, there will be no market through which the Warrants may be sold and purchasers may not be able to resell the Warrants purchased in the Offering. This may affect the pricing of the Warrants in the secondary market, the transparency and availability of trading prices, the liquidity of the Warrants, and the extent of issuer regulation. See "Description of Offered Securities – Warrants".

The Company has agreed to indemnify the Agent and its directors, officers, employees, shareholders and agents against any and all fees, costs, expenses, losses, claims, actions, damages, fines, penalties, or liabilities of any nature whatsoever, joint or several, that arise out of or are based, directly or indirectly, upon the performance of the professional services rendered to the Company by the Agent or its directors, officers, employees, shareholders or agents pursuant to the Agency Agreement. This indemnity does not apply to the extent such fees, costs, expenses, losses, claims, actions, damages, fines, penalties, or liabilities as to which indemnification is claimed arise solely out of gross negligence or wilful misconduct in the performance of such professional services.

The Agent may not, throughout the period of distribution, bid for or purchase common shares of the Company. The foregoing restriction is subject to certain exceptions, on the conditions that the bid or purchase not be engaged in for the purpose of creating actual or apparent active trading in, or raising the price of, the common shares of the Company. These exceptions include a bid or purchase permitted under the Universal Market Integrity Rules

administered by the Investment Industry Regulatory Organization of Canada relating to market stabilization and passive market making activities and a bid or purchase made for and on behalf of a customer where the order was not solicited during the period of distribution.

The Offered Shares and Warrants comprising the Units, and the Warrant Shares issuable on the exercise of the Warrants have not been and will not be registered under the U.S. Securities Act or any securities or "blue sky" laws of any of the states of the United States, and may not be offered or sold, directly or indirectly, within the United States or to, or for the account or benefit of, U.S. persons except in accordance with an exemption from the registration requirements of the U.S. Securities Act and applicable state securities laws. The Agency Agreement enables the Agent, by or through the US Agent, to offer and sell the Units in the United States to U.S. Institutional Accredited Investors, provided such offers and sales are made in compliance with Rule 506(b) of Regulation D under the U.S. Securities Act and/or Section 4(a)(2) of the U.S. Securities Act and applicable state securities laws. Moreover, the Agency Agreement provides that the Agent will offer and sell the Units outside the United States only in accordance with Rule 903 of Regulation S under the U.S. Securities Act. The Units that are sold in the United States or to, or for the account or benefit of, a U.S. Person will be restricted securities within the meaning of Rule 144(a)(3) of the U.S. Securities Act and will carry resale restrictions to the effect that such securities may only be offered, sold or otherwise transferred pursuant to certain exemptions from the registration requirements of the U.S. Securities Act.

This prospectus supplement (together with the accompanying short form base shelf prospectus dated August 18, 2015) does not constitute an offer to sell, or a solicitation of an offer to buy, any of the Units within the United States. In addition, until 40 days after the commencement of the Offering, an offer or sale of the Units offered hereby within the United States by a dealer (whether or not participating in the Offering) may violate the registration requirements of the U.S. Securities Act unless such offer or sale is made pursuant to an exemption under the U.S. Securities Act.

## RISK FACTORS

**Investing in our securities is speculative and involves a high degree of risk.** You should carefully consider the risks set out below and under the heading "Risk Factors" beginning on page 15 of the accompanying short form base shelf prospectus dated August 18, 2015 and beginning on page 9 of the AIF, and the other documents we have incorporated by reference in this prospectus supplement that summarize the risks that may materially affect our business before making an investment in our securities. Please see "Documents Incorporated by Reference". If any of these risks occur, our business, results of operations or financial condition could be materially adversely affected. In that case, the trading price of our securities could decline, and you may lose all or part of your investment. The risks set out in the documents indicated above are not the only risks we face. You should also refer to the other information set forth in this supplemented short form prospectus as well as those incorporated by reference herein and therein, including our financial statements and the related notes.

### Risk Factors Related to the Company

***History of Losses***

The Company has a history of losses, and there is no assurance that any of its contemplated products will generate sustainable earnings, be profitable or provide a return on investment in the future. The Company has not paid dividends in the past. Its directors will determine the future dividend policy of the Company if the Company generates earnings in the future, based on operational circumstances at that time. The Company had negative cash flow from operating activities for its fiscal year ended December 31, 2014 and for the three and nine month periods ended September 30, 2015 and this negative cash flow is expected to continue.

***Profitability***

There is no assurance that the Company will earn profits in the future, or that profitability will be sustained. The medical device industry requires significant financial resources, and there is no assurance that future revenues will be sufficient to generate the funds required to continue the Company's business development and marketing activities. If the Company does not have sufficient capital to fund its operations, it may be required to reduce its

research and development efforts or in the future reduce its marketing efforts or forego certain business opportunities.

***Going Concern***

The Company will require additional financing in order to continue its research and development program through to completion and take advantage of future opportunities. The ability of the Company to arrange such financing in the future will depend in part upon prevailing capital market conditions, as well as upon the business success of the Company. There can be no assurance that the Company will be successful in its efforts to arrange additional financing on terms satisfactory to the Company. If additional financing is raised by the issuance of shares or convertible securities from treasury, control of the Company may change and shareholders may suffer additional dilution. If adequate funds are not available, or are not available on acceptable terms, the Company may not be able to take advantage of opportunities, or otherwise respond to competitive pressures, remain in business and continue as a going concern.

**Risk Factors Related to the Offering and the Units**

***There can be no assurance that the Offering will be completed.***

The completion of the Offering is subject to the completion of definitive binding documentation and satisfaction of a number of conditions. There can be no certainty that the Offering will be completed.

***There may be no market for the Warrants.***

In the event that the TSX listing requirements for the Warrants are not satisfied, there will be no market through which the Warrants may be sold and purchasers may not be able to resell the Warrants purchased in the Offering. The Offering Price and the allocation thereof between the Offered Shares and the Warrants comprising the Units have been determined by negotiations between the Company and the Agent.

***Enforcement of judgments against foreign persons may not be possible.***

Canadian investors should be aware that John Hargrove, a director and the Chief Executive Officer and Chairman of the Company, Dr. Bruce Wolff, a director of the Company, and Dennis Fowler, the Executive Vice President of Clinical and Regulatory Affairs, all reside outside of Canada and, as a result, it may not be possible for purchasers of the Units to effect service of process within Canada upon these persons. All or a substantial portion of the assets of these persons are likely to be located outside of Canada and, as a result, it may not be possible to satisfy a judgment against such persons in Canada or to enforce a judgment obtained in Canadian courts against such persons outside of Canada.

***The Company is subject to risks related to additional regulatory burden and controls over financial reporting.***

The Company is subject to the continuous and timely disclosure requirements of Canadian securities laws and the rules, regulations and policies of the TSX and the OTCQX. These rules, regulations and policies relate to, among other things, corporate governance, corporate controls, internal audit, disclosure controls and procedures and financial reporting and accounting systems. The Company has made, and will continue to make, changes in these and other areas, including the Company's internal controls over financial reporting. However, there is no assurance that these and other measures that it may take will be sufficient to allow the Company to satisfy its obligations as a public company on a timely basis. In addition, compliance with reporting and other requirements applicable to public companies create additional costs for the Company and require the time and attention of management of the Company. The Company cannot predict the amount of the additional costs that the Company may incur, the timing of such costs or the impact that management's attention to these matters will have on the Company's business. In addition, the Company's inability to maintain effective internal controls over financial reporting could increase the risk of an error in its financial statements. The Company's management, with the participation of the Company's Chief Executive Officer and Chief Financial Officer, is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control over financial reporting is a process

designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives due to its inherent limitations. Internal control over financial reporting is a process that involves human diligence and compliance and is therefore subject to error, improper override or improper application of the internal controls. Because of such limitations, there is a risk that material misstatements may not be prevented or detected on a timely basis, and although it is possible to incorporate into the financial reporting process safeguards to reduce this risk, they cannot be guaranteed to entirely eliminate it. If the Company fails to maintain effective internal control over financial reporting, then there is an increased risk of an error in the Company's financial statements that could result in the Company being required to restate previously issued financial statements at a later date.

## ELIGIBILITY FOR INVESTMENT

In the opinion of Borden Ladner Gervais LLP, counsel for the Company, and Baker & McKenzie LLP, counsel to the Agent, based on the provisions of the *Income Tax Act* (Canada) (the "Tax Act") and the regulations thereunder (the "Regulations") in force as of the date hereof,

- the Offered Shares will, on the date of issue, be qualified investments for trusts governed by registered retirement savings plans (each an "RRSP"), registered education savings plans, registered retirement income funds (each a "RRIF"), registered disability savings plans, deferred profit sharing plans and tax-free savings accounts (each a "TFSA"), all within the meaning of the Tax Act (collectively, "Plans") provided that the Offered Shares are listed on a "designated stock exchange" as defined in the Tax Act (which includes the TSX); and
- the Warrants will, on the date of issue, be qualified investments for Plans provided that either (1) the Warrants are listed on a "designated stock exchange" as defined in the Tax Act (which includes the TSX), or (2) the Offered Shares are listed on a "designated stock exchange" as defined in the Tax Act (which includes the TSX) and the Company is not, and deals at arm's length with each person who is, an annuitant, a beneficiary, an employer or a subscriber under or a holder of such Plan.

Notwithstanding the foregoing, if the Offered Shares and Warrants held by a TFSA, RRSP or RRIF are "prohibited investments" for purposes of the Tax Act, the holder of the TFSA or the annuitant of the RRSP or RRIF will be subject to a penalty tax as set out in the Tax Act. The Offered Shares and Warrants will be a "prohibited investment" if the holder of a TFSA or the annuitant of a RRSP or RRIF, as the case may be: (i) does not deal at arm's length with the Company for purposes of the Tax Act; or (ii) has a "significant interest" (within the meaning of the Tax Act) in the Company. In addition, the Offered Shares and Warrants will not be a "prohibited investment" if the common shares and Warrants are "excluded property", as defined in the Tax Act, for a TFSA, RRSP or RRIF. Holders who intend to hold common shares or Warrants in a TFSA, RRSP or RRIF should consult their own tax advisors in this regard.

## CERTAIN CANADIAN FEDERAL INCOME TAX CONSIDERATIONS

In the opinion of Borden Ladner Gervais LLP, counsel to the Company, and Baker & McKenzie LLP, counsel to the Agent, the following is, as of the date hereof, a summary of the principal Canadian federal income tax considerations generally applicable under the Tax Act and Regulations thereunder to the acquisition, holding and disposition of common shares or Warrants by a holder ("Holder" and collectively, the "Holders") who acquires common shares and Warrants pursuant to this prospectus supplement. This summary is applicable to a Holder who, for the purposes of the Tax Act and at all relevant times, is resident in Canada, deals at arm's length with, and is not affiliated with the Company and holds common shares and Warrants as capital property. Generally, the common shares or Warrants will be considered to be capital property to a Holder provided that the Holder does not hold such common shares or Warrants in the course of carrying on a business of trading or dealing in securities and has not acquired them in one or more transactions considered to be an adventure or concern in the nature of trade. Certain Holders who might not otherwise be considered to hold common shares as capital property may, in certain circumstances, be entitled to have such common shares (but, for avoidance of doubt, not Warrants) and all other "Canadian securities" as defined in the Tax Act owned by them in the year in which the election is made and all subsequent taxation years treated as capital property by making an irrevocable election under subsection 39(4) of the Tax Act. **Holders contemplating such an election should consult their own advisors.**

For the purposes of this summary, the term "common shares" shall also include the Offered Shares and any Warrant Shares acquired upon the exercise of the Warrants, unless the context otherwise requires.

This summary is not applicable to a Holder: (i) that is a "financial institution" for purposes of the "mark-to-market" rules in the Tax Act; (ii) that is a "specified financial institution" within the meaning of the Tax Act; (iii) that reports its "Canadian tax results" within the meaning of the Tax Act in a currency other than Canadian currency; (iv) an interest in which is, or for whom a common share would be, a "tax shelter investment" within the meaning of the Tax Act; or (v) that has entered or will enter into a "derivative forward agreement", within the meaning of the Tax Act, in respect of common shares and/or Warrants.

This summary is based upon the current provisions of the Tax Act and the Regulations thereunder in force as of the date hereof, all specific proposals to amend the Tax Act and Regulations thereunder (the "Tax Proposals") which have been announced by or on behalf of the Minister of Finance (Canada) prior to the date hereof, and counsel's understanding of the current administrative policies and assessing practices of the Canada Revenue Agency (the "CRA") which have been made publicly available prior to the date hereof. This summary assumes that the Tax Proposals will be enacted in the form proposed and does not take into account or anticipate any other changes in law or in the administrative policies or assessing practices of the CRA, whether by way of judicial, legislative or governmental decision or action, nor does it take into account provincial, territorial or foreign income tax legislation or considerations, which may differ from the Canadian federal income tax considerations discussed herein. No assurances can be given that the Tax Proposals will be enacted as proposed or at all, or that legislative, judicial or administrative changes will not modify or change the statements expressed herein.

**This summary is not exhaustive of all possible Canadian federal income tax considerations applicable to an investment in common shares or Warrants. Accordingly, this summary is of a general nature only and is not intended to be, nor should it be construed to be, legal or tax advice to any investor. Investors should consult their own tax advisors for advice with respect to the tax consequences of an investment in common shares and Warrants, based on their particular circumstances.**

***Currency Conversion***

For purposes of the Tax Act, all amounts relating to the acquisition, holding or disposition of common shares and Warrants (including dividends, adjusted cost base and proceeds of disposition) must generally be expressed in Canadian Dollars. Amounts denominated in any other currency must be converted into Canadian Dollars generally based on the exchange rate quoted by the Bank of Canada for noon on the date such amounts arise or such other rate of exchange as is acceptable to the Minister of National Revenue (Canada).

***Acquisition of Common Shares and Warrants***

A reasonable allocation of the Offering Price between the Offered Share and the Warrant that comprise each Unit will be required to determine the cost of each to the Holder for purposes of the Tax Act. The Company has advised its counsel that, of the CDN $0.90 Offering Price per Unit, the Company intends to allocate CDN $0.65 to the Offered Share and CDN $0.25 to the Warrant. Although the Company believes that such allocation is reasonable, it is not binding on the CRA or any Holder and the CRA may not agree with such allocation. Counsel expresses no opinion with respect to such allocation.

When common shares (including an Offered Share) or Warrants are acquired by a Holder who already owns common shares or Warrants, the cost of newly acquired common shares or Warrants will be averaged with the adjusted cost base of all common shares or Warrants, respectively, owned by the Holder as capital property before that time for the purpose of determining the Holder's adjusted cost base of all common shares and Warrants, as the case may be, held by such person.

***Exercise of Warrants***

The exercise of a Warrant to acquire a Warrant Share will be deemed not to constitute a disposition of property for purposes of the Tax Act and consequently no gain or loss will be realized by a Holder upon such an exercise. When

a Warrant is exercised, the Holder's cost of the Warrant Share acquired thereby will be equal to the aggregate of the Holder's adjusted cost base of such Warrant and the exercise price paid for the Warrant Share. The Holder's adjusted cost base of the Warrant Share so acquired will be determined by averaging such cost with the adjusted cost base to the Holder of all other common shares owned by the Holder and held as capital property immediately prior to such acquisition.

***Expiry of Warrants***

In the event of the expiry of an unexercised Warrant, the Holder will realize a capital loss equal to the Holder's adjusted cost base of such Warrant. The tax treatment of capital gains and losses is discussed in greater detail below under the subheading "Capital Gains and Losses".

***Dividends***

Dividends received or deemed to be received on the common shares will be included in computing the Holder's income. In the case of a Holder that is an individual (other than certain trusts) such dividends will be subject to the gross-up and dividend tax credit rules applicable in respect of taxable dividends received from "taxable Canadian corporations" (as defined in the Tax Act). An enhanced dividend tax credit will generally be available to a Holder that is an individual in respect of dividends designated by the Company as "eligible dividends". There may be limitations on the ability of the Company to designate dividends as "eligible dividends". Individuals (other than certain trusts) may be subject to alternative minimum tax in respect of taxable dividends.

In the case of a Holder that is a corporation, the amount of any such taxable dividends that is included in its income for a taxation year received or deemed to be received on the common shares will generally be deductible in computing its taxable income for that taxation year. In certain circumstances, subsection 55(2) of the Tax Act (as proposed to be amended by Proposed Amendments released on July 31, 2015) will treat a taxable dividend received by a Holder that is a corporation as proceeds of disposition or a capital gain. Holders that are corporations should consult their own tax advisors having regard to their own circumstances.

Holders that are "private corporations" (as defined in the Tax Act) or "subject corporations" (as defined in the Tax Act) may be subject to a refundable tax under Part IV of the Tax Act at a rate of 33⅓% on dividends received (or deemed to be received) on the common shares to the extent such dividends are deductible in computing the Holder's taxable income for the year. This refundable tax generally will be refunded to a Holder that is a corporation at the rate of CDN $1.00 for every CDN $3.00 of taxable dividends paid to its shareholders while it is a private corporation or subject corporation. However, on December 9, 2015, the Minister of Finance of Canada tabled Bill C-2 which proposes to increase the rate of the refundable tax imposed under Part IV of the Tax Act from 33 1/3% to 38 1/3% for, generally, all dividends received after 2015. This Bill has not yet been enacted.

***Disposition of Common Shares and Warrants***

A disposition or deemed disposition by a Holder of common shares (other than on a purchase for cancellation by the Company) or Warrants (which, as discussed above, does not include an exercise of Warrants to acquire such Warrant Shares) will generally give rise to a capital gain (or capital loss) equal to the amount by which the proceeds of disposition, net of reasonable costs of disposition, are greater (or less) than such Holder's adjusted cost base of such common shares or Warrants, as the case may be, immediately before the disposition or deemed disposition.

The tax treatment of capital gains and losses is discussed in greater detail below under the subheading "Capital Gains and Losses".

***Capital Gains and Losses***

Generally, one-half of any capital gain will be included in the Holder's income as a taxable capital gain and one-half of any capital loss must normally be deducted as an allowable capital loss against taxable capital gains realized in the taxation year of disposition or deemed disposition to the extent and under the circumstances described in the Tax Act. Any unused allowable capital losses may be applied to reduce net taxable capital gains realized in the three

preceding taxation years or any subsequent taxation year to the extent and in the circumstances prescribed in the Tax Act.

If the Holder is a corporation, any capital loss arising on the disposition or deemed disposition of a common share may, in certain circumstances be reduced by the amount of any dividends previously received or deemed to have been previously received on the common share. Similar rules may apply to reduce any capital loss in respect of the disposition or deemed disposition of common shares held by a trust or partnership of which a corporation, partnership or trust is a member or beneficiary. Holders to whom these rules may be relevant should consult their own tax advisors.

A Holder that is a "Canadian-controlled private corporation" (as defined in the Tax Act) may be required to pay an additional 62/3% refundable tax on certain investment income, including taxable capital gains. However, on December 9, 2015, the Minister of Finance of Canada tabled Bill C-2 which proposes to increase the rate from 6 2/3% to 10 2/3% for all taxation years that end after 2015 (and such rate will be prorated for taxation years beginning before 2016 according to the number of days in the taxation year that are after 2015). This Bill has not yet been enacted. Individuals (other than certain trusts) may be subject to alternative minimum tax in respect of capital gains.

**Holders should consult and rely on their own tax advisors with respect to the application of these additional taxes based on their own particular circumstances.**

## TRANSFER AGENT AND REGISTRAR

The transfer agent and registrar for the common shares of the Company is Computershare Trust Company of Canada, at its principal office in Toronto, Ontario, Canada.

## EXPERTS

The Company's financial statements as at December 31, 2014 incorporated by reference in this prospectus supplement have been audited by BDO Canada LLP, independent auditors, as set forth in their report incorporated by reference in this prospectus supplement. BDO Canada LLP is independent with respect to the Company within the meaning of the Rules of Professional Conduct of the Institute of Chartered Professional Accountants of Ontario.

## LEGAL MATTERS

Certain legal matters relating to this offering and the validity of the securities offered by this prospectus supplement are being passed upon for us by Borden Ladner Gervais LLP, Toronto, Ontario and on behalf of the Agent by Baker & McKenzie LLP.

As of February 9, 2016, the partners and associates of Borden Ladner Gervais LLP and Baker & McKenzie LLP, respectively, beneficially owned, directly or indirectly, less than 1% of our issued and outstanding securities.

## PURCHASERS' STATUTORY RIGHTS AND CONTRACUAL RIGHTS OF WITHDRAWAL AND RESCISSION

Securities legislation in certain of the provinces of Canada provides purchasers with the right to withdraw from an agreement to purchase securities. This right may be exercised within two business days after receipt or deemed receipt of a prospectus and any amendment. In several of the provinces, the securities legislation further provides a purchaser with remedies for rescission or, in some jurisdictions, revisions of the price or damages, if the prospectus and any amendment contains a misrepresentation or is not delivered to the purchaser, provided that the remedies for rescission, revisions of the price or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province for the particulars of these rights or consult with a legal adviser.

Original purchasers of securities issued under the this prospectus supplement which are convertible, exchangeable or exercisable into other securities of the Company ("Convertible Securities") will have a contractual right of rescission against the Company in respect of the conversion, exchange or exercise of such Convertible Securities. The contractual right of rescission will entitle such original purchasers to receive the amount paid upon conversion, exchange or exercise of such Convertible Securities, upon surrender of the securities issued to such purchaser upon conversion, exchange or exercise of such Convertible Securities (or any convertible securities issued upon the conversion of such Convertible Securities, if applicable), in the event that this prospectus supplement contains a misrepresentation, provided that (i) the conversion, exchange or exercise takes place within 180 days of the date of the purchase of the Convertible Securities under this prospectus supplement; and (ii) the right of rescission is exercised within 180 days of the date of the purchase of such Convertible Securities under this prospectus supplement. This contractual right of rescission will be consistent with the statutory right of rescission described under section 130 of the *Securities Act* (Ontario), and is in addition to any other right or remedy available to original purchasers of Convertible Securities under section 130 of the *Securities Act* (Ontario) or otherwise at law.

Original purchasers of Convertible Securities are cautioned that the statutory right of action for damages for a misrepresentation contained in a prospectus is, under the securities legislation of certain provinces, limited to the price at which such Convertible Securities were offered to the public under the prospectus offering. This means that, under the securities legislation of certain provinces, if the purchaser pays additional amounts upon conversion, exchange or exercise of the security, those amounts may not be recoverable under the statutory right of action for damages that applies in those provinces. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province for the particulars of this right of action for damages, or consult with a legal advisor.

## CERTIFICATE OF THE COMPANY

Dated: February 9, 2016

The short form prospectus, together with the documents incorporated in the prospectus by reference, as supplemented by the foregoing, constitutes full, true and plain disclosure of all material facts relating to the securities offered by the prospectus and this supplement as required by the securities legislation of British Columbia, Alberta and Ontario.

**TITAN MEDICAL INC.**

(SIGNED) "*John Hargrove*"
Chief Executive Officer

(SIGNED) "*Stephen Randall*"
Chief Financial Officer

On behalf of the Board of Directors of Titan Medical Inc.

(SIGNED) "*John Barker*"
Director

(SIGNED) "*Reiza Rayman*"
Director

## CERTIFICATE OF THE AGENT

Dated: February 9, 2016

To the best of our knowledge, information and belief, the short form prospectus, together with the documents incorporated in the prospectus by reference, as supplemented by the foregoing, constitutes full, true and plain disclosure of all material facts relating to the securities offered by the prospectus and this supplement as required by the securities legislation of British Columbia, Alberta and Ontario.

**BLOOM BURTON & CO. LIMITED**

(SIGNED) "*Jolyon Burton*"
Chief Executive Officer and Head of Investment Banking